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RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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RAILWAY ENGINEERING.

PLAN FOR THE CONSTRUCTION OF CHEAP AND SAFE RAILWAYS, WITHOUT HIGH EMBANKMENTS, DEEP CUTTINGS, AND TUNNELS.

BY THOMAS FARRIN, C.E.

Very few indeed of the railways, depending on passenger traffic, pay legal interest, and those that pay more would cease so to do if there were any competition, which, sooner or later, must be expected. This unfavourable state of railway affairs is to be attributed to the enormous expense of construction, which, in almost every case, has so vastly exceeded the estimates, as to involve dishonesty or incompetence on the part of the engineers, who must now either consult economy, and their employer's interests, or have no more railway work to do. Through the dishonesty or incompetence of these gentlemen, thousands of families and individuals, who had calculated on living in comfort on good dividends, are suffering severe privations, while numerous others are totally ruined.

These facts are so palpable, and universally acknowledged, that it would be utterly impossible to raise the money for any new line of railway, to be constructed under the present system. We shall not again behold lawyers and engineers for competing lines squandering away 200,000*l.* (a sum sufficient to make a railway of twenty miles) in attempts to procure an Act of Parliament! No, no, the hey-day of lavish expenditure is passed—railways are at a stand—while the country is left to enjoy only a limited portion of the advantages which this philosophical means of transit is susceptible of conferring. But, could railways be made so cheaply as to insure to capitalists a good return for their money, and cheap conveyance to the public, the extension of railways would become general, and their benefit inconceivable. Both objects are to be attained by the adoption of a system which (with, perhaps, few exceptions) dispenses with cuttings, embankments, and tunnels (the *chief* items in railway expenditure), and otherwise vastly simplifies railway construction.

The basis of the plan is the application of a wooden bridge, upon an entirely new principle, of immense strength and great durability, and so cheap, that it may be adopted the whole line of road in any part of the kingdom, instead of having embankments, whereby levels and inclined planes may be procured across deep valleys at so trifling an expense as to admit of no comparison with that hitherto incurred to accomplish the same object.

Another prominent feature of the plan, is the adoption of gradients, not admissible on ordinary railways, whereby the expense of construction will be still further vastly diminished. This desideratum is attained by the use of wooden wheels for the engines, and of wooden, instead of iron, rails, on inclined planes. The impracticability of ascending gradients exceeding 1 in 100, has hitherto rendered any material deviation from a dead level impossible. It is generally known, that the iron driving wheels of the locomotive-engines slip round on iron rails on inclines instead of going forward, and that, in frosty and wet weather, the trains are often brought to a stand, or only progress a very few miles an hour, the driving wheels and the rails being all the while exposed to a very destructive process of grinding, which not only creates delay, but often considerable danger and alarm. But with wood driving wheels, especially on wooden rails, this and drawback to the railway system could have no existence, as the bite on the rail would be so good as altogether to prevent the wheels spinning round, when they must go forward. It has been objected, that the wood would become polished, but, even were it so, the remedy is at hand—the tar brush and fine sand—which can, with ease, be applied at full speed.

A further important part of the plan, is the adoption of a single instead of a double line of rails, and saving the space at present allowed on either side of, and between, the two lines. In respect to viaducts and tunnels, as at present formed, the saving in width, by this arrangement, will be eighteen feet in twenty-four, which is prodigious, while, in respect to cuttings and embankments, it is much more, according to depth and height. On this means of economising, a single observation would be superfluous; though it may be remarked, that the only conceivable reason (except that for a footpath, for which provision will be made) for allowing a space of three or four feet outside the rails, is to afford the trains room to get off the rails and upset. A great outcry will be raised by most engineers against a single line of railway, because it will considerably curtail their emoluments, but no other reason can be assigned why there should be two lines; for, by a very simple arrangement, one line is sufficient for any road, as is demonstrated on the London and Birmingham, by the slow trains turning out at given spots, and stopping till the faster trains have passed them. The same arrangement can, of course, be made for trains meeting, as well as passing each other, collision, then, being impossible. The trains on most roads start too often. Every three hours is as frequent as public convenience can require. Starting three trains to Birmingham, within an hour, (another of the ridiculous; the starting, however, is so managed, as to compel travellers, as much as possible, to go by the first-class train, at the enormous price of 30*s.*—in fact, the directors, having lavished away about seven millions of money (thereby entailing on the concern a charge of 1000*l.* per day), now occupy their time in devising means to extract all the money they can from the pockets of the people, in order the better to atone, in the face of the proprietary, for their folly and want of judgment. Seven millions of money for a road only 111 miles long! Well may the Americans laugh at us thoughtless spendthrifts!

Under the present system, the number of what are called accommodation bridges, rendered necessary by cuttings and embankments, is great, and their cost enormous—those on the Birmingham line having absorbed nearer a million than half a million of money. Upon my plan, few, or none, will be required, nor will there be any destruction of property worth mentioning.

The elasticity of the road, combined with the wooden wheels, will prevent all injurious vibration, and render the travelling most agreeable, while the wear and tear of the engines, carriages, and rails, will be essentially lessened. The "maintenance of way," now very expensive, will scarcely form an item of expenditure. Few policemen will be required, and trespass and intrusion of rare occurrence, if not impossible. The purchase of land will be infinitely less, and there can be no waiting for, or danger from, the subsidence of embankments; and as great will be the facility of construction, that a road may be completed in a quarter of the time it takes at present to execute the work. In regard to the safety of the plan, the carriages, in addition to the ordinary sources of security, are shut along a deep groove, formed by the fence on either side, and are otherwise prevented getting off the rails (upsetting being then impossible) by an inclined plane, about three inches deep, on the outer side of the bearers. The wheels cannot break, let the speed be what it may; and as the centre, of which they are chiefly made, extend from the rail to the axle, on which even a severe concussion (could it occur) would have little or no effect; the breaking of the axles, which, on ordinary railways, is a frequent and frightful source of accident, is almost impossible; but, were this to happen, the wheels are so confined, between the carriage and the fence, that no serious consequence could be apprehended. As, then, the rails cannot get out of gauge—as there will be no embankments to subside—and no getting off the rails, upsetting of carriages, the breaking of wheels and axles, and collision, cannot occur, travellers may have the fullest confidence that their lives and limbs will not be exposed to danger. So little land will be required for such a railway, and so little injury will it, in any case, do, that few, if any, landowners would be found opponents, especially as the road would be a benefit, and, in most cases, greatly improve property. Enclosures of the road of the ground, and clearing it of buildings, I would, moreover, [illegible] in regard to the hill and dale, to be an average of the whole country, enabled to make a railway, not less than fifty miles long, for 11,000*l.* per mile, and

to complete the work in two and a half years, confident it could be done in a much less time.

THE PATENT BRIDGE FOR VIADUCTS.

The arch, which, for strength, is the segment of a circle, is composed of blocks of wood, pickled, for preservation, in a solution of sulphate of copper, and cut on two sides to the line of the radius, the grain in the same direction. In the middle of the other two sides, which are square with the top and bottom, are grooves, in the shape of a **V**, forming, in each row of meeting blocks, a diagonal square hole, for the reception of tongues, or *ribs* (of themselves of great strength), extending the entire span of the arch. In the middle of the *voussoirs*, forming the sides of the arch, are square grooves, wherein are inserted strong flat bars of iron, with holes, at intervals, for transverse iron bolts, which bind the *voussoirs* laterally, and render them one solid mass of inconceivable strength. In oblique, or skew bridges, the ribs are fixed in transverse beams at the end of each arch, constituting it as strong as a square one, while much more easy of construction, and much less expensive. On the piers of each bridge is laid a transverse beam of wood (also cut on each side to the line of the radius), serving for a double *voussoir* at the spring of each arch, which, projecting on each side, forms a base for the main stanchion for the fence; to the top of which, and at the centre of the arch, is secured a strong bar of iron, giving to the bridge the additional strength of the suspension principle. The piers are of brick and concrete (the former casing the latter to nearly the top), and may be carried to a great height, at a comparatively trifling expense. They are rendered exceedingly solid and secure by means of a cross beam, which binds the two piers together; and, when the height of the bridge requires it, wooden side props, which can be fixed at any angle, are used to prevent oscillation, and afford the further security which the increase in height renders necessary. The expense of the props, if applied every nine yards (the span of the arch) is only a few yards, whereas an embankment of great height, and corresponding width at the base, costs an enormous sum. The iron suspension bars, combined with the props, give to the fence all the strength that, under any casualty, could be requisite. The arch is effectually secured against damp and wet by a thick coat of cheap cement.

THE WOOD RAILS, WHICH MAY BE USED THE WHOLE ROAD, OR ONLY AT INCLINES.

The rail is of hard wood, the grain vertical, with grooves in the sides, similar to those in the *voussoirs* of the bridge, bolted between two levelled horizontal planks, in which are corresponding grooves for the reception of tongues to insure a uniform surface. The ends of the rail are square with the top and bottom, while those of the planks are cut to opposite angles, and form a double wedge, so that, when two lengths are placed together, each fits into the other, rendering any partial sinking impossible, and constituting the rails one continuous piece the entire length of the road. For a further description of the rails, I refer to the *Mining Journal* of the 8th January.

THE IRON RAILS

are flat bars, either cast or malleable, secured by screws to longitudinal bearers of wood, which, on bridges, are made firm to the framework over the spandrils of the arches, but, on the ground, are laid on concrete, in the same way as the wooden rails. On the inside edge, the bearers are rabetted about three inches deep from the surface, to form a bed for the rails, with an inclined plane outwards, which, independently of the fence, renders it impossible for the wheels to get off the rails. Cast iron, when laid on a uniform surface, not liable to derangement, is preferable for rails to malleable iron, as if neither rolls out, nor laminates, or peels off in use. With wooden wheels, iron rails are, except on inclined planes, as good as wooden rails.

LAW INTELLIGENCE.

GIBSON v. PATTE AND ANOTHER.—INVOTEES OF THE NORTHERN COAL MINING COMPANY.—In this case, which was lately tried at the Liverpool Assizes, before Baron Rolfe, and reported in our last publication, the Court of Queen's Bench has, we are informed, since granted a rule nisi to set aside the nonsuit.

CONSTITUTION OF JOINT STOCK BANKS—IMPORTANT CASE.

COURT OF REVIEW—APRIL 26.

RE PARTE COOPER AS YOUNG.—Sir J. Cross said, the petitioners stated themselves to be the trustees of the Surrey, Kent, and Sussex Joint-Stock Banking Company, claiming a debt of 1423*l.*, with leave to avail themselves of certain securities, and to rive dividends as creditors for the residue, the balance of a current account. This had been objected to by the assignees, and one of the points having become the subject of an appeal to a superior court, this petition stood over to await the result. The petitioners represent a banking company, not constituted under the Act of George IV., nor incorporated under the statute; in this company the bankrupt held certain shares, and it was a rule or bye law that the company should hold a lien on all shares for advances made to the shareholders. The first objection urged by the assignees was, that the petitioners were in partnership with the bankrupt, and not entitled to come in in competition with the other creditors. To this it had been answered that there was no evidence of competition; that no joint creditors of the bank had proved debts; that the bankrupt was a distinct trustee, and that therefore the petitioners were entitled to prove. The bankrupt was not only a banker as a shareholder, but was also a banker in a separate business, under the name of Young and Son, but the shares were held in his own name only. He (Sir J. Cross) was of opinion that the dealings with the petitioners were a distinct trading. There was no evidence of competition between the petitioners and the creditors; probably there was none. He was therefore of opinion, that the petitioners were entitled to come in as creditors under the Act. As to the securities of which the bankrupt was sought, the first was a real security, to which, if the petitioners were entitled as creditors, there could be no objection. The second was a lien on twenty shares, of 10*l.* each, in the banking company. To this it was objected that the bankrupt was the reputed owner, and that the shares passed under the 75th section; but if such reputed ownership the assignees offered no evidence, and the petitioners were entitled to retain them. As to the deposit of two policies of insurance, the same objection of reputed ownership was urged, but no evidence offered, the counsel resting the claim on the ground of the petitioners not having shown notice to the assignees office before bankruptcy. It was a hard that this was conclusive evidence, but he was of opinion that the want of proof of notice was not sufficient, and that there was nothing to show reputed ownership. The Court of Chancery had, under the hearing of this petition, affirmed the former judgment of the court in another case (*in re* Sloper), relative to the assignment of a policy of insurance. He was, therefore, of opinion the petitioners were entitled to stand as creditors for the balance of the banking account, and to have the benefit of all the three securities. As to the shares, it would be requisite to declare the company entitled to apply them in settlement of the debt, and it would be left to the committee to fix the value.

COMMERCIAL BANK OF ENGLAND—DIRECTORS' REPORTS.

COURT OF EXCHEQUER—APRIL 25.

TAYLOR v. ASHTON AND OTHERS.—This was an action in which the plaintiff sought to recover damages from the defendants for certain alleged false and fraudulent representations as to the solvency of the Commercial Bank of England, by reason whereof the plaintiff was induced to purchase shares, which had turned out wholly useless to him. It appeared from the pleadings that the false representations on which the action proceeded were a report to the company of which the defendants were then managing directors at Manchester. By that document it was put forth that the bank was a very profitable undertaking; that it had realised 10 per cent. net profit, and would pay 8 per cent. dividends, and was a good investment for capital. This glowing picture having been made known to the plaintiff by one Langton, an officer of the company, he purchased 400 shares. The defendants pleaded in answer to this, inter alia, that Langton was not their agent, and had no authority to make such representations as was said to be by the plaintiff, and also that the representations, if any, came within the 9th George IV., c. 14, so as affecting the credit and solvency of a third party, and not having been signed in writing by the defendants, gave no right of action to the plaintiff. These pleas being duly entered in, the case was argued to-day for some hours by Mr. Kelly for the plaintiff, and Mr. Tomlinson and Mr. W. H. Watson for their respective clients, the defendants having entered in their pleas. No judgment, however, was pronounced by the court; but a suggestion being thrown out to the counsel engaged as to the propriety of the plaintiff's amending his declaration, against which certain exceptions were taken in the course of the argument, the further hearing of the case was adjourned, in order to give time for the adoption of that course.

ANTI DRY-ROT COMPANY—JUDGMENT.

DOE v. THOMPSON.—In the course of the day Mr. Baron PARKE gave judgment in this case, which was a special action against the defendant, on the promissory of the Anti Dry Rot Company, for not registering the plaintiff, who claimed to be a registered proprietor of certain shares in that company. The fact of shares being held, the defendant refused to register the plaintiff, and on the trial it appeared that a great number of shares had been forfeited by reason of the non-payment of calls. The question of whether the forfeiture was valid or not was left to the jury, who found that the officers of the company were invested in shareholders, as were parties who had bought those shares at sheriff's sales, and that the plaintiff could not compel the secretary to register the plaintiff, inasmuch as the register was already completed; but the court, after argument, had come to a decision opposed to that of the learned Chief Baron, and now held it does that the company could not rely on the mere fact of the register being full, for if it was improperly filled up by such servant, a bona fide holder of shares had a right to compel them to register his shares. There ought, therefore, to be a new trial; but the plaintiff would do well to make out his title to these shares from the original subscribers, otherwise it would by no means follow that he could compel the company to register him. That point had not been taken at the trial, and was not therefore available to the company now, though it arose on the argument, for it might be that, though the plaintiff was in possession of the shares at the trial, he could have deduced his title to them very clearly. Under these circumstances the rule for a new trial must be made absolute.—Rule absolute accordingly.

LAW OF PATENTS—ALLEGED INFRINGEMENT.

VICE-CHANCELLORS' COURT—APRIL 26.

RUSSELL v. LEDSAM.—This was a dispute between the patentees of two rival inventions for making metal tubes at Birmingham. Mr. Russell was the owner of a patent originally granted to one Cornelius Whitehouse, in 1825, for an improved method of manufacturing tubes for gas and other purposes, and the defendants represented the Union Rolling-Mill Company, who were the assignees of a patent granted to Mr. Prosser, in March, 1840, for a similar purpose. Mr. Russell alleged the defendant's process to be an infringement of his patent, and gave notice of a motion in July last for an injunction to restrain them from proceeding with their works. The day before the long vacation the counsel on both sides agreed upon an order, and the motion passed without argument, but the terms of that arrangement having been since very warmly disputed, particularly with reference to the inspection of the defendant's works in progress, his Honour determined to have the matter argued before him *de novo*, and consequently the original motion for an injunction was regularly opened by Mr. Richards and Mr. Campbell, on behalf of the plaintiff, and retained by Mr. Bethell, Mr. Roteh, and Mr. Chandless, for the defendants. The principles of the two inventions, and the essential difference between them, are clearly stated in his Honour's judgment. The only question was, whether one was an infringement of the other.

The VICE CHANCELLOR said, the case was an extremely interesting one, and particularly for the reason that it seemed quite established by the evidence that, what in substance the plaintiff claimed as the principle of his invention, was altogether new—viz., the causing to pass by some means or other the imperfectly formed iron tube, when nearly in a state of fusion, through a cylindrical ring, so as by the process to cause the edges of the metal to weld, and, in that sense, form a perfect tube. The plaintiff appeared to be indifferent as to the means by which the propulsion of the heated metal was to take place through these rings, which he termed "swages" or "dies," and in this respect there was a difference between his invention and the mode adopted by the defendants. The plan of the defendant was to take four rollers in the shape of pullies, which were grooved, and formed collectively a cylindrical ring. He then contrived to give a propulsive motion to form the tube. The four rollers had the effect in the process of compressing the tube in every part and producing the operation of welding, but at the same time of itself, and by itself, causing the tube to move forward. By this means he got rid of all the machinery of a draw bridge and pincers which the plaintiff employed. The substantial difference was, that in the plaintiff's invention the die was fixed and motionless, not only in the sense of standing still, but that it communicated no motion; whereas the rollers used by the defendant, though they were fixed, in the sense that their centres did not move, yet their circumferences did, and this motion they communicated to the tube as it passed through the rings. That was certainly an important difference, though it was not for him now to pronounce an opinion upon it. Then it was also observable there were this direction in the plaintiff's patent not to be found in that of the defendant—viz., that after the tube had been moved to a certain extent the pincers were to be taken off, and the thing was to be reversed in position, so that the other half should be fused and exposed to the action which the former had gone through. Again the plaintiff's specification limited the length to which tubes might be made to eight feet, whereas it was reasonably plain that so far from limiting his tubes to eight feet, he might make them of any length to which the tube could be propelled. Considering all these differences, his Honour thought it was one of those cases in which it was part of his duty to send the matter to a jury. There was, no doubt, great advantage derived from the improvement the plaintiff's invention had effected, and if it were true that there was also a great improvement by the machinery of the defendant, if the court were to grant the injunction, it might be depriving the public of that very improvement, on the ground merely that the defendant's operations might be, to a certain extent, an infringement of the plaintiff's patent. It was a case in which he should be extremely unwilling to interfere, unless the case were irresistibly clear. The best thing he could do was to direct an action to be brought by the plaintiff, and let the motion stand over with liberty to either party to apply.

THE CHINA CLAY AND CHINA-STONE TRADE.

A correspondent of the *West Briton* represents this particular branch of Cornish mineral traffic as being in a state of considerable bustle and activity, at Charlestown, in transit to Rouen and other foreign ports.—"Since the announcement (continues the writer) of Sir R. Peel's tariff, a heavy speculative foreign demand has sprung up. The export duty at first fixed was the preposterous rate of 30*s.* per ton, or 6*s.* per cent. on the value of the article. The amended tariff, however, reduces it to 10*s.* per ton; but with this reduction I believe the foreign export will be nearly prohibitory, and, as a natural consequence, the French and other merchants are accumulating stocks before it comes into operation. With all due deference to the present Ministry, whose commercial modifications I generally approve, I am decidedly of opinion that the export duties upon the mineral products of coal and pottery clay, &c., are partial and unjust. The British collier and clay owner, I conceive, has a fair and unquestionable right to carry his produce to the best market, as the home-protected corn and provision grower, manufacturer, or smelter. Immense capital has been embarked in our collieries, and of late years, from there being a nominal export duty only, an enormous continental demand has arisen from the vast extension abroad of steam navigation, gas lighting, and steam mass actuating power. It may be considered expedient to place a heavy duty on the export of the raw material, but I again declare I believe it partial and unjust, and think it will neither answer the minister object—the protection of the foreign manufacturer, or addition to the revenue. The almost prohibitive duty on coals and clay will operate as a bounty and stimulus upon foreign collieries and clay works. The coalfields, peat bogs, and forests of the continent, will now be ransacked with intense interested scientific competition, for a cheap supply of fuel. But to return to the immediate local question. The principal supply of pottery and china clay and stone for one of our new important national manufactures, china ware, and pottery, is derived from Cornwall. About 50,000 tons of this article are annually exported from the quays of Charlestown and Fowey, affording a most important and convenient back freight to British steamers from South Cornwall to Liverpool, Glasgow, South Wales, Sunderland, &c. Not being engaged in the trade, I am not prepared with statistical details, but believe about 4000 tons of the above quantity is also shipped directly and indirectly to the French, Belgian, and Prussian potteries. Formerly it is shipped in whole cargoes from Charlestown in foreign and British bottoms; but indirectly, by which I mean in small parcels (ten to fifty tons), it is shipped with general continental cargoes from the great mercantile emporiums of Liverpool and Glasgow. The Cornish clay trade has been the creation of the last half century, and the great inventions of that prince of modern potters, Josiah Wedgwood, Esq., led to its use and discovery. It is raised only within a limited range of district, though by no means confined to that locality, and the supply apparently is unfathomable. This locality is the granite mountain range of Hensbarrough, as branching into the several parishes of St. Austell, St. Mewan, St. Stephen's, St. Dennis, Roche, and St. Blazey. It lies near the surface, and the principal expenses in bringing it into a marketable state are labour and carriage to the coast, together with conveyance, through of late years, from the low price at which it has been rendered, vast quantities are sent in "bark"—that is, the clay in cast into square pieces, and instead of being packed in casks, as heretofore, is sent open as bricks or stone. The stay-works for within three to seven or eight miles of the shipping ports, to which there is generally access by means of excellent roads. Labour and carriage are exceedingly low, the former being cheaply supplied by a hardy frugal class of mountaineers, and the latter by hard-working little rural occupiers, or cottage farmers. The produce daily would out, I conceive, at present much interfere with this particular branch of commerce, as our British potters have long since defied competition, and have established and guaranteed most of the ancient continental manufactures, such as Dutch, Delft, &c., and those which remain owe their existence to high protecting duties. Still it will interest, as I wanted in the coal trade, a rapid search for another supply. That supply, it appears from a report of the French Institute, can be readily obtained in the granitic Pyrenean range of the South of France, near Bayonne."

The writer, in conclusion, adds:—"I accordingly expect to state, from recent information from one of our principal clay merchants, that the inquiry and demand for the wares of the Staffordshire potteries is now exceedingly limited, from the falling off in the American and home trades; large pottery firms are now giving only from two to three days a week labour, and, in addition, discharging hands."

RALEIGH AND EXETER RAILWAY.—So forward are the different works at and near the station, at Tiverton, that not the least doubt exists of the opening of the three prescribed, in July next; so that in about two months from this time, London will be within little less than a commodious five hours journey of Tiverton.

NEW IRON BRIDGE—DR. SPURGIN'S PATENT.

Much attention having, for some time past, been directed to a great improvement in bridge building effected by Dr. Spurgin, we have much satisfaction in submitting the following description of one just constructed, according to that gentleman's patent, at Messrs. Brown, Lennox, and Co.'s, Newbridge Works, near Cardiff. The new plan, we may observe, exhibits great strength, renders piers or buttresses unnecessary, and its several parts are so arranged that they can be conveniently carried by an army or others, so that rivers, too deep to be forded, may be crossed with the utmost ease and expedition. The bridge referred to is intended to cross the Montaqua River, in the new colony of Vera Paz (and effects the first road communication direct between the Atlantic and Pacific Oceans), republic of Guatimala; as its site is many miles inland, and the roads such as only to allow the parts being transported thither on mules' backs, and the load for a mule, including saddle, being from 230 lbs. to 240 lbs., it is necessary that no part of the bridge should weigh more than 100 lbs., as the mule must be loaded by a piece being suspended on either side of it; and, as the river runs through a mountainous district, and subject to frequent and very rapid floods, it was also necessary that the bridge should consist of only one arch, which is composed of three ribs of wrought-iron, forming the segment of a circle, its chord 83 ft., and rise 7 ft.; each rib is composed of twenty-seven pieces, 3 ft. 1½ in. long; the section of the rib is 10 in. by 1½ in., with a flange on each side at the 1 in. square—these pieces are made in two halves, for the convenience of transport. The pieces forming the rib are joined together by strong side links, and 3-inch joint bolts; the three ribs are connected together by cross stays of 2½in. round iron, and the whole strengthened laterally by diagonal bracing fastened to the ends of the cross stays. As it is intended principally for the passage of horses or mules, the breadth is only nine feet; the roadway is formed of strong planking bolted to the rims, and the side railing (of wood) is also bolted to the ribs by strong iron straps. The weight of the whole is only thirteen tons, and as all the parts are simple and easily made, its cost is very small compared to that of a suspension bridge. The accuracy of the joints and the strength of the whole has been tested by suspending from the centre a load of three tons. The appearance of the whole is peculiarly neat and light, and is well adapted for ornamental waters.

IMPORTANT IMPROVEMENT IN THE CONSTRUCTION OF MARINE BOILERS.—(*From a correspondent.*)—Since the introduction into steam boilers of Mr. C. W. Williams's principle for the more effectual combustion of coal, and the prevention of smoke, no little interest has been felt on the subject in Liverpool, Manchester, and other important towns in England, where the dense volumes of smoke arising from steam-engines employed in the various factories may be fairly rated as an evil of the "blackest" character. Several large factories in England have adopted Mr. Williams's plan with the most perfect success, not only acquiring thereby the great desideratum of smokeless chimneys, but also the more important pecuniary advantage of a considerable reduction in the consumption of fuel. From the peculiarity in the general construction of marine boilers, this important improvement has hitherto been of but little advantage to the numerous steam-vessels which crowd our ports; the directors of the Dublin Steam Company, however, when recently giving orders for new boilers for their mail contract steamer *Prince*, requested Mr. Williams would undertake to direct the construction of the boilers to suit as near as possible the introduction of his improvement; and on Saturday last this fine vessel entered Kingstown harbour for her first time smokeless, having received her new boilers fitted up under Mr. Williams's direction. Several scientific gentlemen visited the engine-room of the *Prince* when getting up her steam to return with the mails, and, by an ingenious contrivance of temporary syphoics into the flues, were enabled to see the effect of the new plan—indeed, so complete is the arrangement to satisfy disbelievers, that dampers can in a moment be used, which at once cause the furnaces to work on the old principle. The smoky and smokeless plan were both exhibited to the visitors, who went away fully satisfied that we may now enjoy a voyage by steam without having to pass through a cloud of smoke.

ELECTRICAL SOIREE.—The course of subscription lectures at Clapham terminated on Tuesday, the 26th inst., with a *soirée*, devoted to the illustration of the most remarkable phenomena, and the exhibition of the most important applications of that wonder of modern science—the voltaic battery. Mr. Gassiot in the chair. In the room were exhibited specimens and apparatus illustrative of the three important divisions of voltaic effects—viz., electrolysis, electro-magnetism, and calorific effects, into which the descriptive notice was divided. In connection with the former division were a number of electrotypes, collected from among the most able manipulations in this attractive art; electro plate vases, &c.; electro-gilt articles of various kinds; electro-tints, both of Von Kobell and Mr. Palmer; electro-etchings of various kinds; metalochromes, &c. Mr. Gassiot gave a brief notice of the nature of the several productions, with illustrations, by means of Mr. Smee's platinized battery. The company then promenaded the rooms, to examine the specimens, for which every facility and explanation was afforded. During the evening Mr. Walker etched a plate of Clapham Church. We noticed, on one of the tables, a specimen of the insect *Acarus palmarius*, by means of a powerful microscope; and among the diagrams was an admirably executed drawing of the same, on so colossal a scale as to give two feet of length to the body. The company were again seated, and Mr. Gassiot explained the nature of electro-magnetism, and illustrated it by means of a large electro-magnet, placed at the end of the room most remote from his batteries (thereby illustrating the rapid motion of electricity), by Wheatstone's telegraph and clock, both of which acted admirably, and by a large collection of motive-engines, of various constructions, by Wheatstone, Watkins, Henley, and Hill. The secondary spark was shown in a glass globe, and then again the visitors wandered among the apparatus, each to glean information on the subject most attractive to him. It would be no easy task to enumerate all the apparatus connected with this division; one-half of the room was all motion, and hence all life. The dried specimen of the gymnotus (the property of the Electrical Society) was on the table, and excited much interest. The concluding illustrations were the great object of attraction, being the heating effects produced by 100 of Grove's battery, which were magnificent. Iron wire was fused, platinum ignited, and metals burnt; and when the charcoal points were used the flame was as brilliant as the sun, and intense beyond endurance; the room presented, under its influence, a *coup d'œil* not often witnessed. The rotation of the flame was then shown by means of a magnet. After several experiments on combustion, by means of wires spread about the room, the series concluded by conveying the current into the midst of a mass of coloured fire, placed outside the window. To prevent fumes from the battery, the whole was in a closed box, over which was erected a pipe to convey them off. Mr. Gassiot, in conclusion, alluded to the utility of studying Nature's laws, and expressed his conviction, that the more we know of them the more we must admire, and the more firm must be our conviction of the eternal truth of His word. On the whole, everything went off admirably; not one experiment failed, and it is to be hoped that such electrical soirees may often be repeated.

PENFOLD COLLIERY, ROCHDALE.—GHOST STORY.—Yesterday week, the colliers at the Penfold coal pit, near Rochdale, refused to go down the pit to their work, alleging, as a reason, that there was five-drop in the works. The firemen, having been down to examine the plain, pronounced it safe, when the men commenced to go down the shaft, but on arriving at the bottom, were still of the same opinion, and refused to commence work; whereupon the bankmen determined to keep them to their subterraneous prison for their cantonancy. At twelve o'clock some of the relations of the colliers arrived at the pit with the dinners of the prisoners; and, soon afterwards, the usual signal was given from below, that a tub of coals was ready to be wound up, thereby satisfying themselves that the men had commenced work. The engine was immediately set in motion, and up came the tub filled with coal. As soon as it had been safely landed, the coals were soon to howe up, and tumble over the top of the tub. Every individual present, male and female, scampered off, terrified out of their senses at what they had seen, some of them declaring that "a head with a pair of goggle eyes as big as saucers had thrown the coals out of the tub." The mystery was of short duration, for the men and boys in the bottom of the pit were soon seen at liberty above, when the following explanation was given:—The colliers, having no hope of being released till night, put one of the party in a tub, covered him over with coals, and instructed him to release the rest as soon as he landed safe at the top, which, as every one had fled away, was very easily accomplished.

GEOLOGY.—A NEW SYSTEM OF PHILOSOPHY.—No. XV.

BY HENRY GRAHAM MONTAGUE, ESQ.

CHANGES IN THE EARTH'S PLANE OF REVOLUTION, OTHERWISE TERMED THE AXIS OF ROTATION.

The earth, as it advances towards the more perfect or matured state as a planetary body, is necessarily the subject of local and general changes in its plane of revolution—the causes of effects thus manifested being local increase of matter, and consequent disturbance in the axis of rotation. In common with the numerous phenomena of which, in union, it is composed, as one whole it is the subject of incessant change in the general result of matter uniting with matter, and of motions continually uniting and contending with motions, the result of the moment being one, and of the moment only; these necessary changes are common to all planetary bodies and systems, the several planetary bodies passing through series of changes, of progressive development, increase and maturity, of increase and diminution, of life and death, of decomposition and recombination, presenting the like phenomena as is manifest in any of the compounds of which it is composed; thus, as the organic body, by the manifest action of life, increases in its quantities, qualities, capacities, and powers, so is it with the earth, which, from its imperfect embryo state, gradually acquires quantities, qualities, capacities, and powers, the same depending on the local and general affections to which of necessity its parts are exposed.

Was this planetary body constant in its quantities and qualities, and uniform in its parts, and was it also the subject of uniform motions, as is contended for by our greatest astronomers, then would its disposition of parts towards the sun be in like manner uniform and constant; but Nature, which cannot err, teaches us otherwise, testifying, by the local disposition of phenomena, to the necessary changes which the earth in its increase has undergone. The earth in its general movements is not the subject of one, but of conjoint motions, uniting, and contending, and altering perpetually, consequently, as the sum of each motion is ever varying, the result or phenomena of general motion must also be ever varying. In its æthereal state or expanded volume it floats within the still more ætherial medium at an immeasurable distance from the sun, the conjoint motions which affect and regulate its movements, affect and regulate the disposition of its molecules, and the energy of action being, in this stage of production, towards its centre, the natural result is the combination of its atomic particles with the elastic fluid towards the centre; thus, the nucleus or nuclei becomes alternately uniform, aqueous, and consolidated, the latter phenomenon being produced by living action, manifest in living bodies, produced in the waters, and constantly multiplying in numbers and variety. In every vibration of change thus produced, the one planetary body increases in its specific gravity, in its motions, and in its dispositions of matter, and, at the same time, advances nearer to the sun, to which it has a tendency to fall. In all its movements and series of changes it floats in the equilabrium of the moment only, describing its orbicular paths around the sun by moving on its plane of revolution, and not, as heretofore taught to us, on its axis of rotation, being willed and influenced in its movements by the conjoint actions communicated from the medium of space of the sun, which also vary in their force and intensity as the orbicular path becomes circumscribed or enlarged, and as the specific gravity of the earth increasing, the conjoint motions thus imparted become more energetic and immediate.

The earth increases in its quantities locally and not universally, and this truth is manifest to the meanest capacity, the sum of local increase depending upon local production, and moving causes, which affect the disposition of matter. Its increase locally is manifest in the ocean, in local increase of polypi, groups and families of animals and vegetables, accumulations of marls, clays, sands, and commingled matters, all of which, in their mutations and changes, are the relics of organic bodies; it increases in terrestrial earth in the constant local increase of vegetable and animal bodies, and in the changes which are incessantly produced by motions of matter, both in the ocean and the earth, this local increase being sometimes attended by a corresponding decrease in other localities. To illustrate this, so as to meet the humbler capacity, let us take a small snowball; upon moving it on its plane of revolution the consolidated matter increases in the plane of revolution only; thus, its form will become that of a circular disc, or wheel; but, by altering its plane of revolution, according to the true mathematical law of distribution, we obtain a globe, or ball, describing a perfect circle; by deviating from this exact law it presents various elevations and depressions in its surface. Such is the simplicity of Nature, manifest in the appearance of the earth, although the phenomena are somewhat modified, as in the latter increase takes place generally, although the sum of increase is variable, whereas, in the former, the increase takes place locally only.

The bulk of increase of oceanic matter, produced by the operations of life, is locally disposed within the tropical band, manifested, as before observed, by groups and families, generating and decomposing, or consolidating in death, their bulk of aggregate being derived from the medium in which they are produced. It is true that, in all parts of the waters, the operations of life, and the phenomena consequent thereon, are manifest; but it is equally certain that the sum, or product, of consolidated matter, produced by organic action, in localities without the tropical band, is inconceivably less, and as inconstant in its local distribution. The local increase of terrestrial matters is also greatest within the tropical band, from the like reason that, in localities within the tropics, favoured by the conjoint forces of heat and moisture, vegetation is most luxuriant, and animal life is more abundant in number and variety. Again, the bulk of increase of oceanic and terrestrial matters is greatest in localities beneath the tropics, where it is produced by the action of running waters, for the force and volume of rivers, holding earthy matters in suspension, is ever greatest beneath the tropics, as is manifest by the great rivers of Asia, Africa, and America, which annually produce enormous beds, consisting of commingled matters of the ocean and the earth, and which, filling up the beds of the ocean, continually increase the geographical range of the earth. It is true that the ocean tides also govern the local distribution of matter, and are the concomitant causes of effects manifest as accumulations of sands, sandstones, and other compounds, produced by local union of atomic particles and aggregates, held in suspension by the waters, until eventually deposited in or without the line of action of local or general currents, and thus extensive accumulations take place locally.

Granting the progressive development of organic life, the progressive increase of consolidated matter produced in and by the operations of life, and the changes manifest in bodies after the cessation of the living action, it must be admitted that the several compounds which constitute, in their aggregates, the different beds of the earth, must have had a beginning, and from that beginning have been developed in their quantities; every fact elicited from Nature bears incontestible evidence of this, and the lines of production, multiplication, cessation, and change, are so well defined, as to admit of classification; thus, in every large division of the earth, excepting virgin soils, which are exclusively oceanic, or cover in preceding depositions to such an extent as to be beyond the cognisance of man, we observe sands and sandstone, lime and limestone, magnesian, and other oceanic earths, covered in or blended with terrestrial matters, and exemplifies alternations of them denoting a series of general changes; the carboniferous beds are acknowledged to be superficial, and, although, in most certainly in the case, they extend far beneath our present discoveries, yet, I doubt not, the primary soil on which they are deposited will always be found of simple qualities, as sands or a substance, wholly free from those admixtures which characterise recent formations.

The changes manifest in the distribution of matter, resulting from sedimentary deposition, as the multiplication of species for definite periods of time, are not to be misinterpreted; they have, indeed, formed themselves into the belief of the wise and understanding of mankind, against long-cherished opinions and superstitions, and henceforth must be the data of that man who can reject facts attested by the concurrent evidence of his senses. Every portion of the earth to which attention has been directed, has been, at one time, seated within the broad belt of the equator, and evidently, as the organic remains testify, more than once: the beds of ocean have suddenly or gradually become dry land, and, where the influence of climate has been favourable, a new course of life has commenced, of terrestrial, herbaceous, and forestlike animals and vegetables, or tribes of an amphibious nature; the orders produced multiplied in their generations, and the operations of generation, absorption, secretion, excretion, respiration, and multiplication of parts, have produced new results; gaseous, aqueous, and solid compounds, characterise the terrestrial beds, both on the earth when elevated above the waters, and the beds of the ocean on which portions of this terrestrial soil becomes deposited.

The phenomena of production manifest in the present era, will, in an equal measure, explain the phenomena of past ages. Climate is the result of heat and moisture, conjointly or separately; the absence of heat or moisture is alike inimical to the production, support, and propagation of terrestrial, animal, and vegetable life, for, wanting heat, the earth is covered with a lasting mantle of snow, and, wanting moisture, it continues bare and unproductive, until the causes of effects manifest cease to operate—the boundaries of the former being marked by the snow line, forming an irregular curvature, resting on the north and south extremities of the earth, and expanding, according to local circumstances, over the whole surface, being at its greatest elevation beneath the tropics: wanting moisture the earth remains a desert, as is manifest in countries lying near the tropics. Climate is produced by latitude and by elevation of surface, like causes producing like effects; thus, the snows covering the highest points of the Andes and Himalaya are uniform with the snows covering the lowest surface of the earth beneath the Arctic and Antarctic circles, and the organic productions of localities of the same, or nearly the same, temperatures, similate in like manner, the boundary of production, of many orders, being defined by climate. The effects of climate are manifest within the ocean waters which cover the earth, although variably displayed, for the waters, being less influenced by heat or cold, manifest an equalised temperature over a greater extent of space than the earth—consequently, the causes and effects are not so greatly diversified; but there is a boundary beyond which many animal and vegetable species cannot pass, and, therefore it is, their abundance *in situ* is ever an irresistable argument in favour of local influence in their production, thus the hill and mountain range built by polypidoms can be produced beneath the broad belt of the torrid zone only: if, then, we observe it seated beneath the Arctic circle, and elevated above the waters, we have all reasonable proof that the earth has changed in its plane of revolution, and that too without disturbing local depositions, which, by their presence, manifest a sequence of events of a particular epoch, the latitude under which the phenomena were produced, and the change or changes of which the earth has occasionally been the subject.

In the distribution of orders, genera, and species, of organic bodies, we observe the primary causes of many local dispositions and extensive formations, the latter being, of necessity, a consequence of the former; a bed of pearl oysters is the aggregate result of local actions and affections produced under these peculiar influences only; and the like may be said of the polypi, which perform so important a part in the economy of production—every locality of the waters having productions peculiar to that locality, and other phenomena common to all. Every locality of the earth has features peculiar to that locality; thus, when the earth appears in its infancy and simplicity above the waters, its changes are regulated by the local affections to which it is exposed; and, where excess of heat alone is manifest, there this earth remains unproductive, and a desert, continuing such until the causes of effects are removed, and being unproductive, the increase of bulk of consolidated matter is trifling; but where the rains are abundant, the phenomena of increase and decrease are alike manifest, terrestrial earth increasing, and the primary soil, with portions of the terrestrial matter, being carried away by the floods; for, from local influences, rivers take their rise, and, by rivers fertilising the earth, production of terrestrial matters becomes more abundantly manifest, and rivers, lakes, and streams formed, animal life is produced therein, and the consequent phenomena resulting from life are produced, and still producing. Water is more or less essential to the production and sustenance of all species.

Many of the beds of the earth similate in their material in all parts of the earth, the causes of effects produced being similar; thus, sands are produced under all influences, although even these silicious bodies, as is well known, vary in their form, disposition, quantities, and qualities; but there are others which, under all their modifications and changes, can be acknowledged only as the effects of particular local influences. This truth is manifest to all who examine the strata of this country; it consists of beds of marked and determinate character, each bearing evidence within itself of its origin and composition, and also of the primary causes of effects produced. In the bed of lignite, now mineralised as coal, we not only trace, with unerring accuracy, its vegetable origin, but, in the giant reeds, ferns, and other tropical plants, we see the manifest effects of a tropical climate under which alone they can exist; but, were these the only attesting evidences of this portion of the earth being once beneath a tropical clime, this fact might still be questioned, on the grounds that tidal action, or elevation and depression of portions of the earth, could furnish a satisfactory solution to this singularly beautiful enigma; but there are other proofs of change in the plane of revolution of the earth's surface, which, surviving the wreck of ages unimpaired by the corroding hand of time, attest the high antiquity of the earth, and the changes which have taken place in its plane of revolution; the mighty formations, consisting wholly of polypi, tell of the operations of particular species during an uninterrupted succession of ages, tropical heat and quiet seas being absolutely necessary for their production: they now cover the earth in vast aggregates, in regions far removed from the latitude under which they were produced, manifest to observation in temperate climates, and even beneath the Arctic circle, far removed from, and elevated above, their native element, and still undisturbed in their position, thereby manifesting changes in the position of the earth, and widely-extended catastrophes proceeding from these changes.

It cannot be expected that, in the confined space of our paper, I can enter into the minute details of changes, and of the varying causes of each manifest effect. In the beginning of this planetary body this earth was of the elements air and water only, and earth, as it is termed, and the varied phenomena of earth, are produced in the gradual development of organic life, primarily oceanic, but now oceanic and terrestrial. Life departing, the atomic particles and aggregates of bodies were deposited according to the laws of motion and force of matter, aggregating in localities and in separate quantities, not, as is presumed by our eminent astronomers, according to the laws of specific gravity and centrifugal force; but in its increase it united within the waters, forming a nucleus, or germ, of no true geocentrical form, and perpetually varying in that form, as matter perpetually was added to the earth; governed by no other law in its local distribution other than the law of forces, the local accretions being ever inconstant and varying; thus, the whole planetary body was incessantly disturbed in its equilibrium, causing continual imperceptible changes, and occasionally this equilibrium was wholly destroyed, the overcharged portion, or sum of local increase, overcoming the governing rotatory motion, and causing a change to take place in the plane of revolution.

These changes in the local position of matter towards the sun, cause, of necessity, great and wonderful changes throughout every local portion of the earth, for every great division of the earth, of necessity, becomes the subject of new influences, and all animated Nature is affected by each change: thus, the lands beneath the southern belt, within the tropics, may, after a few oscillating movements of the earth, become placed beneath the temperate regions of the north, and, in that change, every living conquest of this lower Creation is destroyed, orders, genera, and species, being blotted out for ever from the book of life, for many orders, genera, and species, are local, and not general; thus, the garden of the earth becomes a desert, uninhabited, and, perhaps, for a time, uninhabitable; but the capacity of life is in the earth, and the elements, to unite, have the tendency, whenever favourably disposed, to produce life: it is produced, and others appear congenial in latitude, constitution, and clime; the earth gives forth its beautiful grasses, magnificent forests spring up, rivers and lakes are formed, and life departs thereto, and another world of life appears, replacing that previously destroyed. Again change, creates peculiar to this local portion of the earth is formed from the atomic particles and aggregates of departed existences, when another sudden catastrophe occurs, and all this fair display of Nature is in a moment plunged beneath the ocean waters, and another latitude, perhaps once more beneath the tropics. The noble forest, prostrate in the soil, gives place to the stony polypi; the relics of countless terrestrial animal life are become the basis of animals secreting lime and other oceanic products, and the whole is the depository and common grave of succeeding generations. Ages again elapse; the hills and mountains, formed by various generations of polypi, add to the bulk of terrestrial earth, and gradually fill up the medium in which they are placed, and to which they owe their birth, and every trace of former changes is once hidden beneath the accumulating waters. Again it becomes terrestrial earth, fed by magnificent tropical streams, and embalmed with life; and again a change takes place, and this extensive portion of the earth is placed beneath the regions of a polar clime.

The vast plains of siliceous sand first to see this last and change: covered with magnificent forests, with rank tropical grasses, arborescent ferns, palms, and fruit trees; its rivers filled with orders, genera, or species, suited to the clime, and many of them peculiar to this extensive portion of the earth, such as ichthyosauri, and other now extinct forms; its plains filled with herds of elephants, with mammoths, sloths, hyænas, and other animals, and intersected by magnificent rivers, or covered with extensive lakes, all teeming with life; it became in a few moments silent and desolate, its panoramic beauties being swept away, or withering before the deadly polar blast. Since that dread period ages upon ages has passed away, but the records of those times, the explanations of the varied phenomena, and of those sudden changes, are, in the ever-during hills and plains, engraven on monumental tablets which cannot err. In all these changes and manifestations Nature affects no mystery; the things which were are, and their presence *in situ* tells their origin and cause. Why, then, does the geologist of the present day step out of the path of Nature, seeking possibilities in the uncertain paths of inductive science, and feeding the mind vitiated by false notions of things derived from education and association with ideas and imaginings equally false? The laws of Nature are the laws of forces, and such govern the production and multiplication of animal and vegetable species; for the maintenance of life, and the propagation of species, it is necessary that the sum of local affections, by which means they exist, should be, and continue, nearly the same: the elephant is the creature of a warm climate, requiring during life a continual large supply of vegetable food suited to its nature; isolated facts speak of this animal being found in temperate climates—as, for instance, there is a very rare species occasionally observed in the higher lands of the Himalaya, but even here the effect of clime is manifest in the dwindled stature and shaggy coat of this now degenerated animal, and, although it may be said to inhabit a temperate clime, it is equally certain that, in the winter, it retires from the hills, and seeks subsistence in the low jungles and ever-verdant plains of India. The plains of Siberia testify that they were inhabited by herds of elephants and mammoths of the noblest growth, and also that the vegetation was such as is necessary for the subsistence of those huge creatures, being the vegetation of another clime than is at present manifest. Humboldt, and his humbler compeer Lyell, may amuse or mislead the public mind with scholarly logic and specious arguments, concerning elevations and depressions, and the degree of radiating heat proceeding from the centre of the earth, and manifest in a far greater degree in its upper crust, in times gone by, but, however strong the argument may be, Nature testifies that there is no means by which the elephant could contrive to exist throughout a Siberian winter, much less could it propagate its species; and, if the climate were too cold for its nature, the high reasoning powers of this animal, of which we have so many extraordinary proofs, would soon direct its steps towards a milder clime. The very fact of the entire and simultaneous extinction of numerous species, manifests sudden change in local disposition, and sudden destruction to all forms of life affected by the change.

But, enough of this. The earth, independent of this, offers countless evidences in proof of not one, but several changes in its position; the polypus structures, the hills and chains of hills, mountains and mountain chains, composed wholly of this material, the organic structure being still manifest, or otherwise hidden in the form of limestone, chalk, marl, and calcareous matter, the beds of oysters and other species, arranged in groups and families, the bulk of aggregate being still *in situ*, undisturbed by these terrible changes, all manifest the forming action still going on in quiet tropical seas, while, in its terrestrial relapse, we see and acknowledge a great and fertile continent covered with forests and magnificent lakes, noble rivers, and innumerable tropical productions.

Every geographical division of the earth bears within itself evidence of these sudden changes, and the general destruction consequent to all animated Nature in that portion of the earth or waters more immediately affected by this, perhaps momentary change from sea to dry land, from terrestrial earth to ocean, from intense heat to intense cold. Every division of the earth gives its fossil organic animals and vegetables—some of the orders peculiar to that division, other genera and species common to other divisions, and even to all; and, in each division, there is a certain disposition of strata manifesting a beginning and continuation up to the present epoch, the gradual production of orders, genera, and species, and of inorganic particles and aggregates termed earth, proving not only the progressive development of species, but also the progressive development of silica, carbon, lime, iron, magnesia, soda, chlorine, iodine, bromine, and other oceanic bodies, and the still continued increase of these compounds, with alumine and other terrestrial products, resulting from the appearance of oceanic matter above the surface of the waters: thus—

1. Oceanic matter, by continued increase of its quantities, and the decrease of the waters, appeared above the waters as dry land, the sum of consolidated matter, and of qualities proceeding therefrom, being less than in the present epoch, the sum of the waters and the atmosphere being proportionally greater.

2. The oceanic matter, subjected in its parts to the action of the atmosphere, underwent numerous modifications and changes, and ultimately terrestrial life, and, as a necessary consequence, vegetable earths were produced, as also the fluviatile and terrestrial phenomena resulting from these products, and the accidents of clime, combination, and change.

3. Rocks, stones, earths, and terrestrial and oceanic strata, still producing and produced.

4. Lakes and seas dried up becoming dry land, and rivers and fresh water lakes formed, their respective phenomena resulting.

5. Local portions of the earth overcharged with accumulating matter, the just equipoise of the earth is destroyed, and a general convulsion or change in the earth's axis takes place, divisions of terrestrial earth disappearing above the waters, and beds of the ocean becoming elevated above the waters.

6. Hills, mountains, and chains of mountains formed and forming as the waters decrease, their form and disposition being governed by organic action, tidal, and other moving causes.

7. Portions of local strata of oceanic and terrestrial matters, continued production and destruction, local and general catastrophes up to the present epoch.

The coal beds of England, the corals, chalk, limestones, and sandstones, the lias and other sedimentary depositions all attest to the like causes and the like effects, that the earth in all its parts has been, is, and will be, so long as it continues a planetary body, the subject of incessant changes in its quantities, qualities, capacities, and powers, and the subject of local and general catastrophes, all being necessary for the perfection or ultimate result. All the phenomena of the earth are produced by local causes, or general causes emulating, and from the variety of causes proceeds the variety of effects manifest or demonstrable to the senses. Terrestrial earth increases by a succession of generations of animals and vegetables, death and decomposition producing the result; every local portion of the earth exposed to the elemental influence of the atmosphere, producing species consonant to the clime and soil by which, and on which, they live, every temperature producing results peculiar to that particular temperature, or more or less common to others. In the regions where the forces of heat and moisture are equalised, the development of animal and vegetable species is rapid, and the increase of the earth is also necessarily rapid. The virgin earth is, in its first appearance to the atmosphere, desolate and destitute of living organic bodies, but in its increase, rivers and fresh water lakes are formed, giving terrestrial fertilisation to this virgin soil, and a continuous development of orders, genera, and species of the lowest extreme end of the earth; in some of these such inorganic bodies have undergone a great and manifest change; the organic bodies in decomposition producing large friable masses of carbonate or oxide of lime, which in recombination become limestone, oxide, layer, and as curses other products, the sulphates and phosphates disappear, between our limestone bodies, sands, pebbles, and ultimately the metals are produced.

As the phenomena are manifest in tropical regions in the present epoch, so were they in earlier ages, the plains in the revolutions of ages become covered with vegetable soil, from whence trees of the noblest growth and beautiful foliage sprung, with lofty trees and flowering shrubs; the waters of tropical streams and lakes teemed with obligations, the marshes were filled with hippopotami, and herds of elephants and species now extinct wandered through the plains. Receding from the equinoctial, the phenomena as now, varied from the above, deserts continued such from age to age, lands became fertile with animals and vegetables peculiar to temperate climes, and the mineral kingdom partook of the nature of the organic bodies, and of the influences of which they were the subjects. Approximating the polar regions, the change was manifest in cool climes, coniferous lakes and forests, and animals and vegetables peculiar to the clime, until the phenomena of vegetable life was lost in perpetual snows and ice, and the animals became few in number.

Who is there in the present day will stand up and contend for the im-

mutability of worlds, for their mathematical exactitude and harmony of form and position? Do we not see the brightest stars in the boundless space around us ever changed and changing, appearing or disappearing in the revolutions of time, and the versatility of motions? As an advocate for the operation of natural causes, directed of mysticism, I war not with facts, for every astronomical, every philosophical truth is with me; the changes advocated, the mutability of worlds have been advocated from the earliest dawn of civilisation; this great truth is proved beyond demonstration the more we examine into the phenomena of strata. The philosopher of Nature is no worshipper of idols, he would stand between Nature and those who pervert her operations, between truth and falsehood, superstition and intelligence. The authority of a name, however great that name may be, cannot sanctify error; the simplicity of Nature is the best guide to those who seek to fathom her most secret operations. It were better that a great name perish, that a great mind be divested of its greatness, than that knowledge be retarded, and the fruits of that knowledge be withheld from the mind struggling to advance its glory as an intelligence.

MEETINGS OF SCIENTIFIC BODIES.

IN THE ENSUING WEEK.

SOCIETY.	PLACE OF MEETING.	DAY.	HOUR.
Westminster Medical	Exeter Hall	Saturday	8 P.M.
Entomological	17, Old Bond-street	Monday	8 P.M.
British Architects	16, Grosvenor-street	Monday	8 P.M.
Medical	Bolt-court, Fleet-street	Monday	8 P.M.
Linnæan	Soho-square	Tuesday	8 P.M.
Horticultural	21, Regent-street	Tuesday	2 P.M.
Civil Engineers	25, Great George street	Tuesday	8 P.M.
Chemical	47, Leicester square	Tuesday	8 P.M.
Society of Arts	Adelphi	Wednesday	7½ P.M.
Geological	Somerset House	Wednesday	8 P.M.
Zoological	57, Pall mall	Thursday	3 P.M.
Royal	Somerset House	Thursday	8½ P.M.
Antiquaries	Somerset House	Thursday	8 P.M.
Royal Institution	Albemarle street	Friday	8½ P.M.
Botanical	20, Bedford street, Cov. g.	Friday	8 P.M.
Royal Asiatic	14, Grafton street	Saturday	2 P.M.
Mathematical	Crispin street, Spitalfields	Saturday	8 P.M.

PUBLIC COMPANIES.

MEETINGS.

Polberro Tin & Copper Mining Co.	44, Finsbury-square	May	2	1.
Alten Mining Association	34, Broad-street buildings		3	1.
Anglo Mexican Mint Company	9, New Broad-street		3	1.
Cheltenham & Gt. Western R'Way & stion, Cirencester			3	1.
Southwark Bridge Company	Queen-street place		3	1.
European Gas Company	69, Finsbury circus		4	1.
Imperial Brazilian Mining Assoc.	London Tavern		5	1.
Mexican Company	69, Great Winchester-street		5	2.
Newport Dock	Office, Newport		5	12.
West Wheal Jewel Mining Co'n	26, Threadneedle-street		9	12.
Croydon Railway	London Tavern		10	1.
Imperial Continental Gas Ass'n.	7, White Hart court		11	2.
National Provincial Bk. of England	12, Bishopsgate street		12	12.
British Iron Company	London Tavern		13	12-1.
Provincial Bank of Ireland	61, Old Broad-street		19	12.

CALLS.

Rio Dove Company	11	May 5.	Union Bank.
Pacific Steam Navigation Co.	11	10.	Sir C. Price, Bart., and Co.
London and Blackwall Railway	21	16.	London and Westminster Bk.

NOTICES TO CORRESPONDENTS.

SHARE LIST.—We are constantly receiving communications in reference to our quotations of the prices of shares, to which, in general, we can only reply, that our list is compiled with the greatest care, and founded on public or known transactions. Whatever sales may be effected in private, or prices thereby obtained, cannot be adduced as the real value of the different undertakings, and rarely influence or regulate market prices; all alterations, however, that are forwarded to us, duly authenticated (as in the case of Caen Brea, of which we are glad to hear so good an account), shall receive prompt attention.

We have received several letters treating on Mr. Montague's New System of Philosophy—some of which are of a nature such as entirely to preclude their insertion; two or three have been referred to that gentleman, and which may, probably, be inserted in our next.

The several accounts we have received respecting the unfortunate disputes, and melancholy results arising therefrom, in the mining districts of Dudley and North Wales, are of so conflicting a character as entirely to prevent our rendering a report, of either the causes or consequences, that might be relied on, as authentic, even were we so disposed—but the differences, as far as we can learn, savour too much of a political tendency to suit our columns.

ORIGINAL CORRESPONDENCE.—We have several letters in type, the insertion of which is necessarily postponed.

BLAENAVON IRON AND COAL COMPANY.—We have received a communication from this company, in reference to a notice in our last, stating that our reporter had been refused admittance to the meeting held on the 22d instant; in which the directors state that some misapprehension must prevail, the especial orders being "that, as on former occasions, our reporter should have full liberty to attend." We have referred the letter to our reporter, who, however, distinctly states, "that on application to be allowed to take notes of the proceedings, he was refused admittance." A notice will elsewhere be found of the report, which accompanied the letter of the directors.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, APRIL 30, 1842.

The mining interest is still kept in a state of suspense and uncertainty as to the intended measures of Government. The deputation from Cornwall have, since our last publication, presented a memorial, in which they expressly state that a duty less than 10*l.* per ton on metal contained in foreign ores imported into this country will be no protection to the British miner, and have further shown the impracticability of smelting foreign ores in Belgium, except at an increased cost of 16*l.* to 17*l.* on the ton of cake copper—which ought, at least, to convince Mr. GLADSTONE and others that they have been misled by the worthy Alderman, and those interested in foreign mines. The chairman of the committee appointed for the protection of the "British Mining Interest" has also drawn up a memorial, addressed to the President of the Board of Trade, entering very fully into the subject, and pointing out the evils that must attend the proposed measures of Government if carried. In addition thereto, petitions have also been presented to the House (one of which we subjoin); communications have also been addressed to the several Ministers—a copy of one of which, from P. N. JOHNSON, Esq., will be found in our columns of to-day—while we have felt it our duty not to be idle. We are given to understand that a sliding scale is proposed by the Minister, varying the rates of duty according to the produce; it is hardly necessary to say, that this is to render the scheme more absurd, by affording further facility for the revenue being defrauded and British industry crippled. We are told that Prince ALBERT has taken upon himself the office of Warden of the Stannaries, and, as if conscious of the injury about to be inflicted on the Cornish Mines, has declined accepting any stipend attached to that office. We trust, as the son of the Duke of CORNWALL, whose interests and future revenue must be affected by the proposed measures of the Ministers, he will feel it his duty to direct the attention of her Majesty to the injury which, under the New Tariff, Cornwall must necessarily suffer, not to advert to the deprivation of revenue to the Crown arising from that county. The following is copy of the petition to which we have referred:—

TO THE RIGHT HONOURABLE THE COMMONS OF THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND IN PARLIAMENT ASSEMBLED.

HUMBLY SHEWETH,—That your petitioners being adventurers, miners, smelters, tradesmen, and others, inhabitants of Asheton, in the county of Anglesey, and its vicinity, have come with very great alarm to the Tariff proposed the admitting of foreign copper ores to be brought into this country to be smelted at the small duty of 2 per cwt., or thereabouts, on the produce of ores above 14 per cent., and 1½ per cwt. on ores under that produce, as such a result must immediately reduce the price of this article, and consequently cause the stoppage of many, if not the whole, of the works in this position neighbourhood.

That petitioners conceive their case to be much more urgent and peculiar to its station than that of other mining districts, owing to the very low produce of their ores, consequently at times being necessarily raised and leaving a profit of one shilling per ton at the present price of five pounds per ton, and yielding more on an average to one from 3 to 4 per cent. of metal, and circumstantial considerations not more than 7 per cent., these benefits of the exclusion by raising the ores being consumed in mines' labour only, independent of the cost of machinery, steam, implements, &c. Should, therefore, the price of five pounds per ton much below be permanent, those mines must be very considerably reduced, to altogether abandoned—the circumstances which would be most severely felt, as upwards of 1,000 persons are now directly employed in those mines, the whole of whom, with thousands of the neighbouring population, are nearly dependent thereon for their bread. The poor labourers and their families, by the stoppage of the works, must be thrown on the parishes, there being no other manufactures or employment for the working poor, and the greater part being advanced in years, are unfit to remove to other countries, while the charities supported by the proprietors of the mines, to the extent of many hundreds of pounds sterling per annum, must of necessity cease.

Your petitioners, therefore, humbly pray that your Honourable House will be pleased to levy a higher rate of duty upon foreign copper ores than that proposed in the Tariff, and which your petitioners are of opinion should not be less than 1*l.* per ton on the metal they contain—a duty which will, in some degree, protect the British miner, and would still permit the foreign miner to send his ores to be smelted in this country on very advantageous terms.

We last week sketched a petition for the miners of Cornwall; and are glad to find that Anglesey, where the population employed in mines is comparatively insignificant, has taken the proper course of making known to Parliament the injury they are likely to sustain, and trust that Ireland will, ere another week elapses, follow the example. Nothing but a strong manifestation on the part of the working miner can effect any beneficial result. We have it on good authority, and which is confirmed by letters received this morning, that one of the Cornish deputation was sojourning at Drayton Manor with the Premier immediately antecedent to the promulgation of the tariff, and that the Ministerial scheme was concocted, and thus the mining interest is sacrificed to free trade principles and visionary speculations—this is not as it should be. We have just received a printed letter from Mr. TREFFRY, but which we have neither space nor time on the present occasion to notice, it, therefore, must stand over until our next. In the meantime, however, we shall give to it all publicity in our power. Again we repeat, miners look to yourselves—act for yourselves—and be not cajoled or deceived by those who should be your advocates and friends, but who, in many instances, are but "wolves in sheep's clothing."

We have before us the first report of the Commissioners appointed for "Inquiring into the employment and condition of children in mines and manufactories," with the reports and evidence of the sub-commissioners, occupying no less than 1974 closely printed pages. From the late period of its publication, it would be absurd, on the present occasion, to attempt a review of the evidence, or even a well-digested notice of the report of the Commissioners, yet we cannot allow papers containing so much valuable matter, especially as regards the coal districts, to which attention appears to have been more immediately directed, to pass by without a brief, although imperfect, notice of the labours and the industry evinced by the sub-commissioners. To do justice, however, to the subject, and to embody the substance of the information attained by their inquiries, it will be necessary that we should arrange the *materiel* before us in a different classification to that adopted by the Commissioners, the several questions and points forming subject of inquiry being collected, and each district considered as a whole.

We have, in another part of the paper, given an abstract of the report of the Commissioners on the coal districts, and shall next week follow it up by their report on tin, copper, and other mines, as also smelting-works—meanwhile, we may glance at the evidence bearing on those points which have, within the past few weeks, created more than ordinary interest, from the alterations proposed by the New Tariff, affecting, as such do, so seriously, the mining industry of this country. It may be well, however, to scan the report itself, as to the main features which it presents. The commission, it appears, was issued in October, 1840, and four commissioners were accordingly appointed, who delegated to others the duties imposed on them of collating information, and on the reports of whom, as well as the evidence collected, the Commissioners founded their report. A series of questions and tabular forms were, in the first instance, drawn out, and, in most cases, these were filled up to the satisfaction of the sub-commissioners, but who, at the same time, express their regret that the returns are incomplete, and thus preclude them from rendering a satisfactory report, or even "a probable estimate." The Commissioners appointed were—THOS. TOOKE, Esq., T. S. SMITH, M.D., and L. HORNER and R. J. SAUNDERS, Esqrs., the sub-commissioners consisting of JAMES MITCHELL, Esq., LL.D., and Messrs. I. L. KENNEDY, S. S. SCRIVEN, L. STEWART, M.D., J. C. SYMONS, and R. D. GRAINGER, whose immediate attention was directed to the iron and coal mining districts of South Staffordshire and Shropshire, and generally to the mining and manufacturing districts in the south. Scotland was divided between Messrs. THOS. TANCRED and R. HUGH FRANKS; Ireland devolved on Mr. FREDERICK ROPER; the northern parts of the West Riding of Yorkshire were committed to Mr. W. RAYNER WOOD; North Durham and Northumberland to Mr. J. R. LEIFCHILD; and the mining and manufacturing districts in the west and north of Lancashire were undertaken by Mr. ANTHONY AUSTIN. This number of sub-commissioners was found, however, to be inadequate, and they were increased to twenty, by the appointment of Mr. T. MARTIN to the North of Ireland; Mr. E. WARING to the Forest of Dean, and other districts in the south of Gloucestershire; Major BURNS to manufactories in the south-east of England; Mr. R. H. HORNE to the iron works of Staffordshire; Mr. J. M. FELLOWS to the coal mining districts of Derbyshire and Nottinghamshire; Dr. BARHAM to Cornwall and Devonshire; R. W. JONES to South Wales; and Mr. H. H. JONES to the mining districts of North Wales and its borders. The serious indisposition of some of the gentlemen so appointed, arising from the severity of the labours imposed upon them in inspecting mines and undergoing much fatigue, rendered a slight alteration from the above arrangement necessary—Dr. MITCHELL extending his inquiries to the coal field of South Durham, as also the lead mines on the borders of Durham, Northumberland, and Cumberland—other deviations being also made. Having thus enumerated the several parties engaged in the inquiry, we shall proceed to give an outline of the report on the tin, copper, and lead mines, and the smelting works, reserving to our future Numbers those details which, in a classified form, it will be our object to present to our readers.

The several subjects to which the attention of the Commissioners were directed may be thus enumerated:—General description of labour, and peculiarities, as connected with the various districts; the number of children and women employed in each department; the nature of the underground workings, their mode of ventilation, drainage, and temperature; mode of ascent and descent; hours of work; accidents; wages; and influence of the employment underground on the physical condition; these may be considered as comprising the main features as regards the underground operations in the metalliferous mining districts. As respects surface labour in dressing the ores—the age, sex, and number, with nature of employment, hours of work, and wages, form in like manner the subjects to which attention has been directed.

From the cursory examination we have made of the report and evidence, as relates to the "mines of tin, copper, lead, and zinc" (for we defer our notice of the coal districts), we are induced to believe, from personal observation, and statistics in our possession, that the information conveyed by the report is but of an imperfect nature—indeed, such is admitted by the Commissioners—and, therefore, must not be taken as the basis on which to arrive at any correct conclusion. We are told that in Cornwall the number of persons employed in the mines is 28,000 to 30,000, and in Devonshire about 1500—in all of which 2335 are children under thirteen years of age. In the Alston Moor district the number of persons engaged in the lead mines is estimated at 3000; of these 2051 are employed by Col. BEAUMONT, the number of children being 182. In Scotland, it appears by the report, that the principal labour employed in mines is that at Leadhills, the number being 400. Of North Wales we have little or no information, very few children being employed. In Ireland, according to the report, the number of persons employed in mines is 4517;—this, we need hardly say, is so much under the number of those engaged in mining operations in that country, that it at once affords proof of the imperfect manner in which evidence has been collected, and the report drawn up.

With reference to the employment of children underground in the mines of Cornwall, we find that out of 1064 boys only 128 are under the age of thirteen. In the Alston Moor district the number is only eighteen. At Lead Hills none are employed under eighteen years of age; in Flintshire the number does not exceed sixty, and in Ireland there is scarcely an instance of children being employed underground. We regret to find, with reference to those important questions—ventilation, drainage, and temperature—the information as regards mines is confined to less than two pages, and, therefore, affords no opportunity for observation or extract. In Cornwall the time of work underground is from six to eight hours—the latter being most general; but, as the "change" takes place at the point of working, and not at surface, the time required for the descent and ascent in the deep mines varying from one to two hours, the time occupied by each "core" may be taken at nine to ten hours.

In dressing the ores, it is observed that the Cornish district is the only one in which female labour takes any important part in this branch of industry. We do not deem it necessary further to observe on the report of the Commissioners, which, with reference to the mineral districts, except as relates to coal, cannot be considered otherwise than imperfect and unsatisfactory, the information conveyed, being, in most instances, confined to Cornwall and Alston Moor—in which latter district, as has been already stated, only 5000 individuals are employed. On the labour employed in the works for smelting the ores, the information conveyed is limited to three pages in the report of the Commissioners, from which it appears that the number of persons employed in the copper works of South Wales is 2036, and which it will be remembered, in our late observations on the tariff, was estimated at 2500. Such is the sum and substance of the report upon the mines of Cornwall, Devonshire, North and South Wales, and Ireland, embracing tin, copper, lead, and zinc, and in addition thereto the smelting works in Swansea and other districts, to which fifty-two pages are devoted; some half-dozen pages embrace all the information to be gathered on "ironstone mines and the manufacture of iron," four-fifths of the report being directed to the coal districts.

It is far from our wish to detract from the merit of the report, or that of the inquiry, fully concurring in its propriety, but, upon the cursory review we have taken of the "report and evidence," we cannot arrive at any other conclusion than that, while the information gathered in some districts is of a comprehensive nature, in others there has been evidently a want of ability on the part of those employed—that a great deal of unnecessary evidence has been adduced, in no way bearing upon the subject of inquiry—and, further, that, from the reports of certain of the sub-commissioners, it is manifest that, not being practically acquainted with the subject which they undertook to investigate, they were incompetent to the performance of the duties imposed upon them, while it is to be regretted that practical men were not engaged to furnish a report upon which Parliament is called upon to determine as to the nature of any Legislative enactment which may appear to be necessary. We consider it our duty thus to express the opinions we entertain of the report and evidence—at the same time, giving full credit to those employed. We are glad to find that Lord ASHLEY and Mr. BROTHERTON have moved the House on the subject, and that it may be expected to come under discussion at an early period.

COAL FORMATION IN CALABRIA.

The proposed export duty of 4*s.* per ton on coals has led to the attention of the capitalist being directed to foreign countries, where it can be raised with advantage so as to supply the place of English coal at the several ports to which it is now shipped for steam navigation, gas, and other purposes. Several speculations are afloat, and amongst other information which we have acquired of late, may be noticed the coal formation of Calabria, the brief outline which we present to our readers being furnished to us by a gentleman who can vouch for its accuracy. The coal-field, if such term may be applied, is represented as being of considerable extent, and the outburst, or crop of the coal measures, is about four miles from the sea, dipping south-east, at an angle of from 20 deg. to 25 deg. The coal seams, of which seven have been discovered, are open to "day," or, in other words, "basset," out to surface. Of these two have only been worked; these appear to be, in fact, one seam, but divided by a band, as they are worked together, giving a four-foot seam. The operations have hitherto been of a confined nature, merely proving the regularity of the bed, and quality of the coal; a few hundred tons have been raised, and put on board, at a cost not exceeding 10*s.* per ton, and which, by laying down a railroad, might be reduced to one-half, there being a gradual fall. The distance to Malta, which consumes a considerable quantity of coal, is represented as being within twenty-four hours' sail. France, it is presumed, also would afford a considerable market, and the prospects, generally, are of a favourable nature. There is one point of importance—that of the encouragement which would be afforded by the Neapolitan Government, and which we are given to understand would be rendered—and, further, a guarantee given that no "Tait monopoly" would be allowed to interfere. For ourselves, we have our suspicions of his Volcanic Majesty; but, perhaps, he may be disposed to be more liberal in his coal "measures" than in his sulphur mines.

COALS, CINDERS, AND CULM.

Parliamentary papers have just been published containing accounts of coals, cinders, and culm shipped coastways, and exported to foreign parts, with the rates and amount of duty charged thereon; of coals exported from the United Kingdom from the 5th of January, 1828, to the 5th of January, 1842; and of coals shipped to foreign countries in 1841, &c. It appears therefrom, that the total quantities of coal, cinders, and culm, so exported to foreign countries and the British settlements abroad, amounted altogether to 1,848,294 tons, the gross total export duties which were received thereon being 12,015*l.* 5*s.* 6*d.* The total quantities of coal taken coastways and by inland navigation into the port of London during the year 1841 amounted to 2,942,738 tons. It further appears that the total quantity of coals exported from the United Kingdom from the 5th day of January, 1828, to the 5th day of January, 1842, was as follows:—

Years.	Tons.	Years.	Tons.
1828	846,464	1835	796,650
1829	871,871	1836	918,688
1830	894,419	1837	1,118,810
1831	816,831	1838	1,313,709
1832	888,446	1839	1,449,447
1833	624,402	1840	1,806,510
1834	813,833	1841	1,942,738

THE BODE LIGHT.—On Thursday evening, Mr. H. Hinde presented a petition to the House of Commons, from Mr. Leithead, praying that, as he understood Mr. Gurney's claim to reward, "for the introduction of a new mode of lighting the House, by means of the Bode light," was under their consideration, his petition should be referred to the same committee, that he might have an opportunity of establishing his claim to the discovery of the invention, which Mr. Gurney was now attempting to appropriate to himself.—In accordance with the wish of hon. Members, Mr. Leithead's petition was referred to the committee on lighting the House, so that there is now some chance that justice will be done to the gentleman, with whom we believe the idea to have originated, from which has emanated that important improvement in the production of light, and to which public attention was originally directed through the medium of our columns.

EMPLOYMENT OF FEMALES AND CHILDREN IN COLLIERIES.—We are glad to find public attention already directed to the important points embodied in the report of the Parliamentary Commissioners, recently issued. In the House of Commons, last night, Lord Ashley gave notice, that, after the Whitsun holidays, he would call the attention of the House to the report; and Mr. Brotherton presented two petitions from the colliers employed in the collieries near Manchester, praying that means might be adopted to prevent the employment of females in coal mines.

SALES OF ORE BY PUBLIC TICKETING AT SWANSEA,

From 1st January, 1841, to 30th April, 1842.

FOREIGN MINES.

1841.	COBRE. Tons.	COBRE. Amount.	SANTIAGO. Tons.	SANTIAGO. Amount.	CHILI. Tons.	CHILI. Amount.	SUNDRY MINES. Tons.	SUNDRY MINES. Amount.	TOTAL. Tons.	TOTAL. Amount.
January 6	161	£23,285 5 0	—	—	353	£9,854 2 6	—	—	1876	£36,860 0 6
" 27	—	—	—	—	442	10,155 10 6	322	£7710 0	764	17,874 2 6
February 3	1005	16,921 6 6	469	£7764 10 6	295	5,711 16 0	—	—	1769	29,397 13 0
" 17	—	—	322	6012 5 6	312	10, 45 1 0	—	—	634	16,957 6 6
March 17	1184	20,314 6 0	69	831 0 0	354	11,244 1 6	—	—	1738	41,389 7 6
" 24	564	9,864 10 0	288	4255 3 6	323	11,245 11 0	—	—	1355	28,365 11 6
April 7	961	14,978 3 6	—	—	497	13,184 16 6	129	2479 11 0	1587	31,638 11 0
" 21	2065	32,530 14 0	332	6981 4 0	993	16,824 5 6	—	—	3412	56,416 3 6
May 5	1130	17,189 7 0	381	7340 6 0	486	9,367 4 6	141	2439 6 0	2787	36,791 3 6
" 19	274	3,832 13 0	—	—	770	14,944 10 0	152	2757 19 0	1196	20,535 2 0
June 2	1409	19,699 5 0	375	8119 2 0	386	10,3 4 9 6	86	1152 0 6	2268	38,774 17 0
" 16	712	12,362 11 0	411	8281 1 0	315	10,607 9 0	—	—	1438	28,294 12 0
" 30	960	14,531 9 6	445	9645 13 0	242	11,249 17 0	—	—	1647	35,858 19 6
July 14	580	6,964 16 0	360	8442 13 0	434	11,674 16 0	39	345 16 0	1413	34,428 3 0
" 28	1334	20,085 12 6	243	5174 3 0	808	19,034 2 6	—	—	2385	44,311 18 0
August 11	—	—	—	—	611	15,721 8 0	—	—	611	15,721 8 0
" 26	622	10,284 14 0	272	5896 13 0	124	2,924 6 0	—	—	1018	19,106 13 0
Septem. 9	749	12,266 15 6	520	9674 19 0	351	6,219 1 0	17	172 14 6	1637	27,733 10 0
" 23	417	8,708 8 6	275	6003 11 6	464	11,249 9 6	—	—	1156	25,962 9 6
October 6	996	17,703 2 6	287	6039 14 0	409	7,578 4 6	—	—	1692	29,411 1 0
" 20	673	9,143 2 0	389	83 3 19 0	262	7,117 16 6	—	—	1313	24,814 17 6
" 27	1014	15,355 14 6	215	2823 16 0	139	2,112 4 0	—	—	1368	20,491 14 6
Novem. 10	1813	22,893 11 6	701	9206 8 6	347	8,678 4 0	—	—	2861	40,989 4 0
Decem. 1	366	4,933 0 0	368	7906 17 0	263	6,625 17 6	—	—	1097	18,954 14 6
" 8	806	10,015 7 6	—	—	—	—	—	—	806	10,015 7 6
" 29	945	11,360 15 0	674	11660 14 0	51	1,053 7 0	—	—	1668	24,093 14 0
	22987	£341,343 10 0	7230	£179,721 13 6	10139	£243,738 1 0	882	£15,962 19 0	41618	£780,966 3 6
1842.										
January 12	1369	£22,275 16 6	—	—	313	£3,943 4 0	—	—	1682	£26,217 0 6
" 26	571	7,799 5 0	265	£5447 16 6	411	11,004 12 0	—	—	1249	24,401 13 6
February 9	748	10,612 7 6	605	8057 9 6	—	—	—	—	1435	19,149 17 0
" 23	1648	25,798 17 0	441	5871 2 0	70	1,998 10 0	92	£1414 10 0	2248	35,084 19 0
March 9	891	9,422 4 6	691	10708 13 0	96	2,818 3 0	4	69 12 0	1682	21,907 12 6
" 23	531	8,066 14 6	5 3	10478 16 6	621	20,107 10 0	—	—	1665	38,792 1 6
April 6	1373	17,739 3 0	674	13092 5 6	602	11,821 15 0	125	1741 8 6	2774	46,404 10 0
" 20	1672	14,596 7 6	—	—	199	3,506 13 6	—	—	1871	28,493 0 0
	4903	£119,510 15 6	3403	£56,448 3 6	2922	£58,741 5 0	221	£3264 10 6	14313	£282,141 14 0

PRODUCE OF MINES IN WALES AND IRELAND.

1841.	WALES. Tons.	WALES. Average price.	WALES. Amount.	IRELAND. Tons.	IRELAND. Average price.	IRELAND. Amount.	TOTAL. Tons.	TOTAL. Amount.
January 6	42	£3 0 0	£126 0 0	855	£10 12 1	£9037 3 6	897	£9163 3 6
" 27	113	5 3 6	595 17 0	943	9 12 9	8970 6 0	1056	9565 3 6
February 3	—	—	—	876	13 17 9	4747 19 0	876	4747 19 0
" 17	119	4 16 9	576 2 0	576	8 8 4	4642 1 0	694	5218 4 0
March 17	48	5 13 0	271 4 0	627	9 11 3	5998 17 6	675	6270 1 6
" 24	104	5 0 3	519 10 0	569	7 9 0	3743 14 6	673	4263 4 6
April 7	—	—	—	550	8 0 3	4479 0 6	550	4479 0 6
" 21	72	2 3 10	156 6 0	791	8 0 3	6283 0 0	863	6439 6 0
May 5	32	3 11 6	105 18 0	986	8 9 3	8171 17 0	1018	8357 15 0
" 19	115	3 4 3	373 3 6	747	9 5 8	6899 3 0	862	7304 7 6
June 2	110	3 13 1	401 19 0	918	9 10 11	9081 6 0	998	9483 5 0
" 16	137	3 9 6	504 3 6	858	9 8 9	7908 11 0	995	8332 14 6
" 30	339	4 19 9	1659 15 6	965	8 6 4	8099 18 6	1304	9659 14 0
July 14	—	—	—	755	8 18 6	6741 3 6	755	6741 3 6
" 28	—	—	—	844	8 13 5	7322 10 6	844	7322 10 6
August 11	129	2 18 3	336 14 0	582	8 7 4	4975 2 6	711	5106 16 6
" 25	—	—	—	924	7 17 3	7269 15 0	924	7269 15 0
Septem. 8	98	3 0 0	294 0 6	1338	9 13 3	12353 1 0	1436	12647 1 6
" 22	—	—	—	235	7 8 9	1749 16 0	235	1749 16 0
October 6	39	5 11 6	191 10 0	913	7 10 0	6171 1 6	952	6362 11 6
" 20	99	4 5 0	416 12 0	47	19 0 0	917 9 0	145	1334 1 0
" 27	—	—	—	871	9 13 6	8079 19 0	871	8079 19 0
Novem. 10	—	—	—	180	8 13 0	1598 11 0	180	1598 11 0
Decem. 1	169	3 10 10	599 16 6	974	8 7 0	8289 9 0	443	8888 15 6
" 8	—	—	—	971	9 0 5	9135 1 6	971	9135 1 6
" 29	105	3 15 9	397 19 0	923	9 1 6	8196 19 0	923	8594 18 0
	1961	£3 13 7	£7313 9 6	14847	£8 16 9	£125,847 9 6	16738	£134,960 19 0
1842.								
January 12	10	£10 5 0	£103 10 0	257	£9 5 3	£2369 13 0	267	£2473 3 0
" 26	103	—	417 14 0	828	9 8 6	7004 13 6	931	7422 7 6
February 9	99	1 5 0	95 0 0	903	7 19 9	8223 11 0	902	8318 11 0
" 23	319	4 1 1	1235 13 6	771	7 19 0	6160 19 6	990	7396 12 6
March 9	40	7 3 6	285 0 0	1165	7 16 3	9078 6 0	1205	9363 6 0
" 23	93	3 19 6	336 0 6	1165	8 15 1	9879 6 0	1198	10014 15 6
April 20	309	6 10 0	2012 6 6	757	7 19 0	6031 19 0	1065	8044 5 6
	793	£5 3 10	£4914 13 6	6039	£8 11 3	£54,176 19 6	6831	£59,421 5 0

BRITISH MINING INTEREST—NEW TARIFF.

TO THE RIGHT HON. THE EARL OF RIPON.

79, Hatton Garden, April 19.

My Lord,—As one of the deputation for the protection of the mining interest of the United Kingdom, I beg, at your lordship's request, to submit the following observations, which more than thirty years' experience in the working of mines, and the application of their products, enables me to do with the utmost confidence. I will confine myself as much as possible to—*first*, the necessity of the protection of our home mines; secondly, to the uses and results of being independent of the supply of the product of foreign mines to our home manufactures in regulating prices; and, thirdly, to the advantage, in point of revenue, of allowing this country to have the benefit of her local advantages. Your lordship is, no doubt, aware that no country has the same advantages as our own, in regard to her mineral productions, and the facilities of bringing these productions to results advantageous to us, both as a commercial and manufacturing nation. To introduce the importance, it must strike your lordship, "What would England be without her coal and iron?" But as this will speak for itself, allow me to draw your lordship's attention to what may be termed the auxiliary productions—copper, tin, lead, zinc, &c. I shall be within the estimate when I say that the mines of these metals employ not less than 200,000 persons, and that their families, and those immediately dependent upon them, amount to more than double that number; that on the prosperity or existence of our mines depends the employment of very many thousands in the manufacture of machinery, gunpowder, rope, candles, miner's tools, iron, &c.; in coal mining shipping, and in the manufacture of an infinite variety of materials. Allow me, then, to assure your lordship, that the British mines, of the metals alluded to, cannot be worked if there is not a protecting duty imposed on foreign produce, equivalent to the local advantages given by Nature and the enterprise of our capitalists and population; the amount of this protection must, of course, depend on the proportionate production of the mines of various metals in our own country, and the abundance and certainty of supply of foreign produce, so as not to interfere with the manufacturing or other interests of the nation; but the produce of our mines, if such protection is given, will always be sufficient to supply our home consumption, and thereby prevent the injury to our mining, manufacturing, and trading population, by our becoming dependent on foreign supply, and render England a mart for, and regulator of, prices to other countries, instead of being the victims of foreign aggression and monopoly, as she has been in the case of lead, zinc, quicksilver, and sulphur.

In regard to the introduction of foreign ores or metals, as an advantage in point of revenue to the country, I beg to draw your lordship's attention to the introduction of copper ore, according to the proposed tariff, where it is evident that some interested parties have suggested the introduction of low produce foreign ores at a less duty than the richer sort hitherto brought over, to the diminution of the revenue of the country, and the total destruction of our home mines; and taking the figures, as proposed duty, as they now stand, it will be shown thus:—

100 tons of ore, of 3l per cent. produce, at 5 per cent.			£100 0 0
600 "	7½	" " 3½	"	19 15 0
	37½		£119 15 0
If these ores are mixed, so as to make an average produce of 15l, they would be admitted, at 200 tons of ore of 15l produce, at 2l per cent.			60 15 0
Leaving a loss to the revenue of			£59 0 0

And even supposing these 100 tons of ore, at 3l per cent. produce, paid duty, which they would do, excluding the poorer sort, but lowered with rubbish, so as to enter at the low duty, the account would stand thus:—

100 tons, at 3l per cent.—duty 1 per cent.	£100 0 0
If mixed, so as to bring it to the lower duty of 2½ per cent.—making 200 tons at 1½ per cent. produce, at 2½ per cent. duty	50 0 0
	£50 0 0

The mixing copper ore, under any circumstances, for the purpose of entering at lower duties, or any scale of differential duties on various qualities of copper ore or other ores, must have the effect of diminishing the duties paid, and lead to the total abandonment of the British mines of this metal.

Now, my Lord, allow me to observe, that so long as the British mines are in operation, there is no possibility of this poor class of ore being smelted abroad, and that the only chance of smelting it available would be the introduction, by reduction to regulate, in the producing country, which would then render it liable to the higher duty; and your lordship will find that the higher the protecting duty put on will support ore, the greater will be the proportionable advantage to the revenue; and, considering the enormous profits (being 20,000*l.* from one mine alone) made by the proprietors of foreign mines by the sale of the richer class of ore, hitherto smelted in bond, this poor class of ore should rather be considered as refuse than be kept bound to the local smelting-wheel of our mines, and the fearful consequences of throwing out of employment so large a portion of our population, unless the proprietors should wish while to accommodate their ores, which would add to the revenue, and give employment to our shipping and coal interests, by supplying coal for that purpose.

In concluding my remarks on foreign copper ores, I beg to refer your lordship to the evidences of those who may be even considered interested in the introduction of foreign ores, as proprietors and smelters, that the advantage this country possesses over others is equal to 4*l.* to 5*l.* per ton on the metal produced, feeling that your lordship will consider that, so long as this protecting duty is allowed, there will be no fear of competition by foreign metals, and that it will be a revenue to the country, both direct and by the consumption of materials used in mining operations, and the employment of British capital and industry.

I will next trouble your lordship with a few observations on the subject of tin and tin mines. Your lordship is aware that England has been famous for her tin mines from the very earliest ages, and always has been, and will be, a mart for tin, and as with respect to regulator of prices to the world, so long as her mines are in operation; but unless there is a sufficient protecting duty bestowable on, by our home supply, to compete with foreign production, the effect must be, not becoming independent on foreign monopolists for supply for the many applications of this metal, at prices ruinous to our manufacturers, and the steady prices for which have only been secured by our produce exceeding our consumption. As a proof of this being the case, I would beg to call your lordship's attention to the fact of a considerable part of the tin shipped from the East Indies, in free trade, and from Peru being consigned to this country (under the existing protecting duty) as being the mart for tin, and to the advantage of the shippers abroad, by insuring and regulating their prices according to the British market; but should a less duty than 10*l.* per ton be put on foreign tin, the effect will be a sudden inundation of foreign produce, which the capabilities of those countries cannot keep up—the abandonment of our mines, most of which can never be resumed, and our manufacturers having to pay exorbitant prices for tin, and becoming subject to foreign competition in its various applications. The English mines of tin have, for some years past, not paid their expenses—in fact, lost 50,000*l.* per annum for some years; but, while they are giving employment to many thousands of an industrious population, the proprietors may be considered the champions of the manufacturers in keeping the prices of the metal comparatively steady, and living in the hopes of making discoveries which may remunerate them for their outlay, while they are prevented from injuring the manufacturer by obtaining too high a price, by the introduction of a limited supply of foreign metal at a duty. I beg to call your lordship's particular attention to the unequal ratio of duty proposed in the tariff of tin ore, which is placed at 3*s.* per ton; this ore contains at least two-thirds metal, therefore 1½ ton of ore making one ton of metal, the proposed duty would be 10*s.* per ton on the white or metallic tin, which duty, or even the proposed duty of 6*l.* per ton on metal, must inevitably cause all our mines to cease working, to the destruction of property, the properties of the labourers, and the injury and ruin of our manufacturers. The advantage in revenue to the country, in rendering us dependent on foreign supply, can never be what your lordship contemplates, as the consumption of tin used for home consumption would only produce a revenue, according to the proposed tariff, of not more than 6*s.*, or at the highest duty 24*s.*, while the taxed articles of consumption for materials employed in mining, and support of population, to produce that quantity, would exceed this sum. Let me, then, in conclusion, entreat your lordship to put at least 10*l.* per ton duty on foreign metal, and an equivalent duty on tin ore, which will scarcely be a protection to either miner or manufacturer.

The next metal to which I beg leave to call your lordship's attention is lead; your lordship may remember that some years back nearly 4000 persons were thrown out of employment by the protecting duty on foreign metal being removed; but the introduction of Spanish lead, our miners ceased to work, the lead for a season was reduced in price to the manufacturer, but has risen since in proportion, from the incapability of Spain to supply the demand, and the prices have again become stationary from the resumption of our home mines, forming, as indeed all the British mines do, a pendulum of prices of metals to other nations. But I must here take leave to observe, that the geological position of the lead, and tin, and copper mines are very different, the lead mines being more productive nearer the surface, while our copper, and most of our tin mines, are most productive at a greater depth, several being upwards of *one* fathoms. Your lordship will therefore see (as I have before stated) the copper and tin miners cannot be resumed in the same manner as the lead; at the same time lead and its ores require such a protecting duty, as will enable us, with our local advantages, to meet foreign competition, so as to insure a supply to our manufacturing population for the various and extensive use of its preparations, and from my practical knowledge of the expenses of mining for it in this country, and the capabilities of foreign supply, I consider that the protection should not be less than 10*s.* per ton on lead ores, and 40*s.* per ton on metallic lead, which would about average 15 per cent. on the current va ue.

I beg to refer your lordship to the metal, zinc (or spelter of commerce). The ores of this ore al in the United Kingdom are more than sufficient to supply our home consumption for many purposes, and, was encouragement given to working them, our manufacturers would not have been subject to the ruinous prices lately paid, in consequence of the falling off of foreign mines and materials for smelting, and monopoly of foreign speculators. Zinc can be produced in this country at 12*l.* per ton, giving a fair profit to the miner and smelter, but, from being dependent on foreign supply, the prices have increased from 11*l.* to 14*l.* per ton, to the injury of our manufacturers of brass, and many other applications. The foreign ores of zinc can never be advantageously introduced into this country, as giving only an average produce of 15 per cent. of metal; the expense of carriage and shipping would be more than the value of the ore, but, if the small protecting duty now paid on metal is continued, it would enable our home mines to keep a check on foreign monopolists, and give employment to British capital and industry in mining for, and smelting, the ores of our home mines, without injury to the revenue, as foreign zinc, for particular purposes, would always be used, and amount to more, at the higher duty, than the quantity produced by British mines, if imported, would be at the lower proposed duty.

I have pointed out to your lordship the effects of this nation becoming dependent on foreign resources for articles which are the natural production of the country, and have only further to draw your attention to the artificial quicksilver and sulphur. The former, although not the produce of England, is employed in the reduction of silver ores in Mexico and South America, where not less than 7,000,000*l.* sterling of British capital has been invested. Until the year 1831 quicksilver was regularly sold at 7*s.* per pound, but the monopoly of this metal having been sold, the price rose that date has averaged 1*s.* 7½*d.* per pound, and is now 2*s.* 1*d.* to 2*s.* per pound, at which price it cannot be used for the amalgamation of large quantities of poor class of ore, which, at the price previous to the monopoly, would have been reduced to advantage. The late monopoly on the article sulphur, has fully tended to prove the capabilities of our country (and from its mineral resources) of competing with foreign supply, and shows the mischief of our being dependent on foreign producers. At the present time many thousand persons are engaged in Ireland, Wales, and England, in mining for iron pyrites, which produces 14 per cent. of sulphur, and (as well as the consumers of Government, in not allowing the violation of smelting) must have experienced the King of Italy of the impolicy of his aggression and unnecessary measures, which raised the price from 4*l.* 5*s.* to more than 12*l.* per ton; and I take leave here to state, that, if a protection of 2*s.* per ton was given on sulphur, our home mines could increase the supply of this article to our manufacturers under the average price of several years.

In conclusion, I humbly, but earnestly, submit to your lordship, that my observations are the result of practical experience, from having been engaged for thirty years in visiting the mining districts and smelting establishments of both nations, and several of those of foreign countries. That if the proposed tariff, as related to metals and metallic ores, passes into a law, the effect will be—

1. The destruction of property invested in mines to the amount of several millions sterling.

2. The pauperism of several hundred thousand of industrious labourers and population.

3. The greatest injury to trade, by rendering our manufacturers the victims of foreign monopolists, and unable to compete with other nations in their articles of commerce and industry.

4. No advantage to the revenue, as the loss of taxes and excise duty on the articles consumed will be greater than the income derivable by duties paid.

I have the honour to be, &c., &c., P. N. JOHNSON.

MINERAL RICHES OF CHILI AND PERU.

At the sitting of the Academy of Sciences, on the 11th inst., M. Dufrenoy read (in the name of a commission composed of MM. Berthier, Elie de Beaumont, and himself) a report upon two memoirs presented by M. Domeyko, and entitled:—1. A notice on the silver ores of Chili, and the processes employed for their reduction. 2. On the mines of native amalgam of silver, of Arqueros, in Chili—a kind of new mineral species, differing from any other amalgam of silver, and the more interesting because it is the principal basis of the productive workings of Arqueros; it is composed of six atoms of silver and one atom of mercury; a composition which no mineral as yet analysed has ever presented. This substance, its constituents constant, is found dendentric and in small octohedral crystals. It is white as silver, like the silver amalgam of Moschel-Landsberg, but differs entirely from the latter by its malleability—it extends under the hammer, and may be cut with a knife; besides, the proportions of silver and mercury—viz., 86·5 of silver and 13·5 of mercury for the mineral of Arqueros, and 36 of silver and 64 of mercury for that of Moschel-Landsberg, establish distinctly the difference between these two species. The moist method of analysis has never sufficed to separate completely the silver from the mercury; it was only by the dry analysis, and conducted under particular conditions, that M. Domeyko was able to obtain the exact proportions of the new mineral which he has made known, and for which the commissioners have proposed the name of "arquerite." The memoirs contained an account of the geological position of the silver mines of Coquimbo, their nature, richness, &c.; also the period and mode of discovery of the mines of Arqueros, their geological and mineralogical characteristics, &c. In concluding the report, M. Dufrenoy announced that M. Berthier, who had verified part of of M. Domeyko's analyses, had recognised in the silver ores of Chanaveille, classed under the names of "pacos" and of "collorados," the bromure of silver which he had discovered in the Peruvian ores. The proportion of bromine varies much; but at all events it is equal to that of the chlorine. Thus this new species plays an important part in the mineral riches of Chili and Peru. The report recommends that M. Domeyko be invited to follow out his researches, and pronounces those just disclosed worthy of considerable interest and attention.

ON THE SYSTEM ADOPTED IN WORKING MINES AND COLLIERIES.

The First Report of the Commissioners appointed "for Inquiring into the Employment and Condition of Children in Mines and Manufactories," has just been presented to both Houses of Parliament—a copy has also been forwarded to us, from which we intend making copious extracts. The report, as relates to the colliery districts, appears to enter fully into the several points to which the attention of the commissioners was directed, and contains much useful and important information, throwing a light on the disgusting and laborious underground labour to which women and children are subjected. We regret we cannot speak in the same terms of that portion of the report devoted to the consideration of the tin, copper, lead, and other mines, and the dressing and smelting of their ores—all which subjects are treated in a comparatively loose and unsatisfactory manner, arising, perhaps, from the different system of management pursued, while, in all probability, the same series of questions may have been put as in the coal districts.

Passing by the evidence, for the present, we come to the "conclusions" arrived at by the commission—from which we learn that, in regard to coa mines, instances occur in which children, both male and female, are taken on as early as four years of age, while from eight to nine is the ordinary age at which employment commences; that a very large proportion of the persons so employed is under thirteen, and a still larger proportion between thirteen and eighteen; the nature of the work generally assigned to the youngest children (that of "trapping"), though by no means to be characterised as labour, yet as occupying them from the commencement until the day is concluded, during which time they are commonly excluded from light, and are always without companions, almost amounts to "solitary confinement of the worst order;" that at different ages, from six upwards, they are employed pushing and dragging the carriages from the workings to the mainways, which requires the unremitting exertion of all their physical power. The commissioners consider that, in some cases, the children have little cause of complaint, in regard to the treatment they receive from the colliers or those in authority, while in many mines the usage of those persons is harsh and cruel; that, in general, the coal owners take but little interest in those employed at their works, after their daily labour is over—little being done to provide the means of innocent amusement and healthful recreation. In the coal district of the east of Scotland, it appears the greatest proportion of children and young persons are employed, many of whom are girls, "the chief part of whose labour consists in carrying the coals on their backs up steep ladders."

With respect to females, it appears that, in the districts where they are taken down into the coal mines, both sexes are employed together in precisely the same kind of labour, and work the same number of hours; "that the girls and boys, and the young men and young women, and even married women, and women with child, commonly work almost naked, and the men, in many mines, quite naked; and that all classes of witnesses bear testimony to the demoralising influence of the employment of females underground."

In many instances much that skill and capital can effect to render the places of work safe and healthy is done, often with complete success, so far as regards health and comfort, but that to render them perfectly safe does not appear to be practicable by any means yet known, while, in very many instances, "their condition, in regard both to ventilation and drainage, is lamentably defective."

The number of hours allotted to the workpeople, when in full employ, are rarely less than eleven, more often twelve, sometimes thirteen, and, in one district, fourteen and upwards—during which time they have no regular cessation—what food is taken in the pit being eaten as best it may, while the labour continues; it is satisfactory, however, to find some exceptions to this slave-like arrangement, for we find that, in well-regulated mines, where the hours of work are generally the shortest, sometimes half an hour to an hour is set apart for meals, consequently less fatigue is experienced by the colliers or children; whereas, in all other instances, the most painful complaints are constantly heard after the ordinary day's work.

The most frequent causes of accidents, the commissioners assign to the want of superintendence, by overlookers or otherwise, to see to the security of the machinery for letting down and bringing up the workmen—the restriction of the number that ascend and descend at a time—the state of the mine as to the quantity of noxious gas in it—the efficiency of ventilation—the exactness with which air-door keepers perform their duty—and, indeed, a most reprehensible practice is the almost universal custom of intrusting this important duty to very young children—due caution as to where it is considered safe or unsafe to go with a naked lighted candle—security of proppings, &c. Many mines even neglect the most ordinary caution to guard against accidents, and never think of expending money with a view to secure the safety, much less comfort, of their workpeople. Two practices (fortunately peculiar to but few districts) deserve the strongest condemnation; "first, the practice, not unknown in some of the smaller mines in Yorkshire, and common in Lancashire, of employing ropes that are unsafe for letting down and drawing up the workpeople; and, second, the practice, occasionally met with in Yorkshire, and common in Derbyshire and Lancashire, of employing boys at the steam-engines for letting down and drawing up the workpeople."

The children are, generally, well fed and clothed, but, in the east of Scotland, some parts of Yorkshire, Derbyshire, and South Gloucestershire, the nature and quantity of food supplied is described as "poor in quality, and insufficient in quantity."

Employment in mines commonly produces, in the first instance, an extraordinary degree of muscular development and strength, but, partly from the severity of the labour, long hours, and unhealthy state of the places of

work, the physical constitution becomes deteriorated—in the thin-seam especially, the limbs become crippled, and the body, already stunted in growth, distorted; the seeds of painful and mortal diseases are often sown at an early age, which, slowly developing themselves, assume a formidable character about thirty or forty, and leave but very few in existence after the premature age of fifty.

Considering the extent of this branch of industry, the vast amount of capital embarked and its intimate connection with all branches of trade and manufacture, as a main source of our national wealth and greatness, it is satisfactory (we quote the report) to have established, by indisputable evidence, the following conclusions:—

1. That the coal mine, when properly ventilated and drained, and when both the main and the side passages are of tolerable height, is not only not unhealthy, but, the temperature being moderate and very uniform, it is, considered as a place of work, more salubrious, and even agreeable, than that in which many kinds of labour are carried on above ground.

2. That the labour in which children and young persons are chiefly employed in coal mines—pushing the loaded carriages of coals from the workings to the main ways, or to the foot of the shaft—is a description of exercise which, while it greatly develops the muscles of the arms, shoulders, chest, back, and legs, without confining any part of the body in an unnatural and constrained posture, and might, but for the abuse of it, afford an equally healthful exercise [illegible] to all the other organs; the physical injuries produced by it, as it is at present carried on, independently of those which are caused by imperfect ventilation and drainage, being chiefly attributable to the early age at which it commences, and to the length of time during which it is continued.

One case, however, is alluded to by the report, as of peculiar difficulty—that in which all the subterranean roadways, and especially the side passages, are of insufficient height; by evidence collected, it is proved "that there are coal mines at present in work, in which these passages are so small, that even the youngest children cannot move along them without crawling on their hands and feet, in which unnatural and constrained posture they drag the loaded carriages after them; and yet, as it is impossible, by any outlay compatible with a profitable return, to render such coal mines—happily, not numerous nor of great extent, fit for human beings to work in, they never will be placed in such a condition, and, consequently, they never can be worked without inflicting great and irreparable injury on the health of the children."

We shall resume the consideration of this subject in our next, when will be noticed the ironstone mines, blast furnaces, the smelting, dressing the ores, and underground labour, in tin, copper, lead, and other mines.

We feel it due to those on whom has devolved, the painful but interesting, inquiry to award that meed of praise to which they are eminently entitled for the minute information acquired. To Dr. Mitchell, F.G.S., and others appointed on the commission, whose elaborate reports are now before us, we repeat, the thanks of the public are justly due.

ON THE EMPLOYMENT OF FEMALES IN COAL MINES.

(Copy of a Petition presented lately to Parliament by Mr. Brotherton.)

THE HUMBLE PETITION OF EDWARD WILLIAM BINNEY, OF MANCHESTER, IN THE COUNTY OF LANCASTER, GENTLEMAN,

Sheweth,—That your petitioner, in the course of his geological pursuits, has had occasion to visit many of the coal mines of Lancashire, where he has often been astonished to find great numbers of females employed, of ages varying from eight years and upwards. Their occupation is chiefly in pushing and drawing tubs or small waggons full of coal from the places where it is hewn down to the waggon ways. The coals are generally drawn along the waggon ways to the pit mouth by ponies; but down the bays or boards (the passages running on the rise and dip of the seam) which are often at considerable inclinations, sometimes as much as two feet in five, and very low, there a [illegible] cannot be employed, so women are made use of in their stead. At first view it is difficult to distinguish the [illegible] employed in a mine, since both, when dressed, are clothed in rough miners' frocks and trousers, and it was only by the exposure of the upper parts of their persons and their voices that your petitioner first noticed the females [illegible] as they were.

That the men in deep mines, where the atmosphere is very hot, generally work without any other article of dress upon them than a slight cotton garment.

That the employment of the females, as is here stated, is in conveying the coals from the workings down to the waggon ways; each of them is provided with a stout belt fastened round the lower part of her waist, to the front of this is attached a strong chain, which fastens by a hook to the waggon or tub. When drawing the empty tubs or waggons up the inclined plane the chain passes between the legs of the woman, who creeping on her legs and arms, drags them up [illegible]

[illegible]

GEOLOGICAL SOCIETY OF LONDON.

April 6 and 20.—Mr. Murchison, President in the chair. A notice was first read "On the Tetracaulodon," by Mr. Koch.—The object of this communication is to support the opinion that the tetracaulodon is generically distinct from the mastodon, and consequently that the tusks in the lower jaw are not merely sexual characteristics. Mr. Koch states that, during his residence in the United States, he examined nearly all the inferior jaws of the mastodon which have been preserved in public and private collections, but in no one instance did he ever observe any traces of a tusk; and Dr. Hays, of Philadelphia, is reported to have arrived at a similar conclusion respecting at least forty specimens of lower jaws. Mr. Koch refers particularly to the mastodon in the Philadelphia Museum, and that preserved at Baltimore, both of which, he says, must have belonged to males. He then alludes to the improbability of the mastodon, with long upper tusks, making use of inferior tusks such as those forming the subject of the present discussion, and never exceeding twelve inches in length; but these tusks, nevertheless bear, Mr. Koch says, evident signs of having been employed in rooting and grubbing; and hence, he infers, that the animal to which they belonged must have had equally short upper tusks. For the purpose of illustrating his views, the author proceeds to offer some remarks on three species of tetracaulodon, to which have been applied the names of *T. Godmani*, *T. Kochii*, and *T. tapiroides*. The first has been described by Dr. Godman, its discoverer, and by Dr. Hays; but Mr. Koch calls attention to the characters presented by the maxillary and nasal bones, as well as to the additional foramen near the molar bone, and which is wanting in the mastodon and elephant. Of the *T. Kochii* the author possesses an entire upper jaw, with six molars and two tusks, found resting on the lower jaw, which contained a tusk undisturbed in its alveolus. The upper tusks indicate, Mr. Koch says, that they were designed to be used in harmony with the lower tusk for rooting and grubbing. They are nineteen inches long, more than one-third of the entire length being concealed in the skull; and their greatest circumference, which is 9½ inches, occurs at the apex, and not on the base. The enamel on the root is very thin, but at the opposite extremity it is uncommonly thick, and this part bears indisputable proof of having been much used during the life of the animal. Mr. Koch admits that the left tusk disappears in the adult animal; but he says that both in the old and young individual the tusks have the same peculiarity of being equal in circumference at the root and farther extremity, and that the "bulb for the reception of the nerve and nourishment of the tusks resembles that of the upper tusks minutely both in the old and young animals, which peculiarity would almost give rise to a suspicion of not merely a different variety of the tetracaulodon, but even of a new genus." The *tetracaulodon tapiroides* has received its specific name from the resemblance of its first grinder to the molar of the tapir. An upper jaw in Mr. Koch's collection contains two tusks, bent downwards like those of the morse, and thickly covered with enamel; and they plainly indicate, he says, that the animal fed on water plants. In conclusion, the author calls attention to some peculiar vertebræ which were found associated with the skull and lower jaws of the tetracaulodon, and he is of opinion that they exhibit characters in accordance with the supposed aquatic habits of that animal.

A memoir "On the Flat Regions of Central and Southern Russia, in Europe," by Mr. Murchison, M. de Verneuil, and Count Keyserling.—This paper, which occupied the greater part of the first, and the whole of the second evening, included in our notice, described the flat regions of Russia traversed by the authors during the summer of 1841; the second, devoted by them to the examination of that empire; and the account of Ural, or mountainous districts, is reserved for subsequent meetings. The formations which occupy this vast territory belong to the Silurian, Devonian, and carboniferous systems; to a great series of deposits equivalent in geological position with the magnesian limestone of England and the zechstein of Germany, and to certain portions of the oolitic, cretaceous, and tertiary systems, the whole being overlaid by far spreading masses of northern drift and other detritus. It is impossible in a notice suited to our columns to grapple with the details of a paper, describing, for the first time, the true order of position of strata extending over 12 degrees of latitude and 30 degrees of longitude, but we will endeavour to give an analysis of the conclusions arrived at by the authors. The centre of Russia, between the parallels of 52 degrees and 56 degrees north latitude, is occupied by a dome of Devonian rocks, which divides the empire into a northern and southern basin, each characterised by marked geological features, but most especially by all the good or workable coal being confined to the southern basin. Over the whole area of European Russia, however, whether it be traversed from Archangel to the Black Sea, from its western confines to the foot of the Ural Mountains, or from St. Petersburgh to the sea of Azof, the strata present a conformable succession and nearly horizontal position, except in the coal regions north of the sea of Azof, where the carboniferous beds are dislocated and highly inclined, and overlaid unconformably by newer deposits. The Silurian rocks do not occur within the flat, central, and southern regions of Russia, but they exist extensively in the Ural Mountains, and will be fully described in future memoirs. The Devonian rocks forming the central dome, before alluded to, differ lithologically from the equivalent strata in other parts of Russia, but they contain the distinguishing ichthyolites of the system, and the same testacea which occur in the Devonian rocks of the south-west of England, the Boulonnais, and the Eifel. They are, moreover, surmounted along their northern frontier by the lowest strata of the mountain limestone. The authors' knowledge of the carboniferous system of Russia was greatly extended during their last expedition. In the northern region or basin, and ranging from near Moscow to Archangel, it exhibits great uniformity of character, consisting principally of a white limestone, which often resembles the calcaire grossier of Paris, and it contains only one thin bed of very impure coal; but in consequence of their extended researches, the authors show that the system may be separated into three divisions, the lowest being characterised by the great *productus hemisphericus*, the middle one by the *spirifer mosquensis*, and many well known carboniferous shells, and the upper division by the great abundance of a foraminifera, to which Fischer de Waldheim has applied the name of fusulina. The establishment of this triple subdivision has enabled the authors to correct some important errors in previous classifications of Russian deposits. But the most interesting feature in this system, south of the central dome, occurs between the Don and the Dnieper, and consists of a vast interlacement of limestones, containing the same fossils as near Moscow, with sandstones, shales, and numerous seams of bituminous as well as anthracite coal. This series the authors state is distinguished from the coal measures of western Europe by the absence of all beds containing fluviatile or lacustrine remains. Along the western flank of the Ural Mountains, the carboniferous limestone is overlaid by grits, conglomerates, shales, and flaggy limestones containing new species of goniatites and plants common to the whole carboniferous series. These beds are considered by the authors to be the equivalents of the British coal-fields, and the lower newer red sandstone, or the rothe todt-liegende of Germany, and reasons are given for separating the latter with its English representative from the newer red sandstone series, and making it the upper but an integral part of the coal measures.

The next system of deposits, in ascending order, claimed the particular attention of the authors, on account of the difference of opinion which had been expressed respecting its true geological position, and the most competent observers having begged them to make it an object of careful research. The series consists of intercalating deposits of limestones, marls, and gypsum, with grits, sandstones, and conglomerates containing copper—of sandstones, marls, sandstones, and rock salt—and of bituminous grits; and it is characterised by a peculiar fauna, but it contains also the typical shells of the magnesian limestone of England, and of the zechstein of Germany, as well as the distinct [illegible] of these formations. Nevertheless, if it had not been for the vast development of this series in Russia, for its possessing an independent flora and fauna, and for the want of a term to express a complex series of deposits, occupying a geological situation intermediate between the carboniferous and triassic systems, the authors would have hesitated to have erected these important rocks into a system. They feel, however, that they are fully justified in doing so, and they propose to designate the system by the appellation Permian, on account of its extensive distribution in the Government of Perm, and because none of the names applied to subordinate [illegible]

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duce, in support of this opinion, instances of erosion or denudation in the red and green marls, before the deposition of the bottom bed of the oolitic series. Though these strata occupy comparatively small areas, especially near Moscow, and on the Volga and Oska, they are extensively distributed in the Government of Simbursk and Saratof, also on the south-west flanks of the Ural, and in the steppes of the Kirghise; but the superior division is only known on the Upper Donetz. The cretaceous system of Russia is, in many respects, identical with that of western Europe, and it contains several of the long-known characteristic fossils; it occasionally, however, presents discrepancies in composition, passing in the highest part into arenaceous strata, so that the fine white chalk is enveloped in masses of marls, sands, and ferruginous grit, analogous to the upper and lower green sand series of England. The tertiary strata of Russia are shown by the authors to agree most strikingly with those of England, the lowest bed being lithologically undistinguishable from the Bognor rock, and containing fossils stated, on the authority of Mr. J. Sowerby, to be identical with Bognor species; and other beds are exact counterparts of the grey-weathers of England, or the paving stones of Paris. The next strata, in ascending order, are shown to be of the age of the Vienna basin or Miocene epoch, and the shelly limestones of the steppes are stated to exhibit the finest examples of a transition from the pleiocene to the post pleiocene series, the organic remains in the uppermost beds being undistinguishable from the shells of the Caspian. Of this most recent deposit, Russia, as the authors observe, possesses peculiarly two distinct accumulations, one characterised by an arctic fauna, now living in the North Seas, and the other by a fauna of temperate zones, or that of the Caspian. In reviewing the phenomena presented by the vast territory which passed under their survey, the authors dwell on the uninterrupted succession of conformable marine deposits throughout nearly the whole of the flat regions of European Russia, or the non-intercalation of terrestrial, freshwater, and estuary formations, connecting the absence of such strata with the total want of intrusive or other igneous rocks, as well as all evidence of violent disturbance and unconformability, except in the coal-field north of the sea of Azof. The cause of these peculiarities, or the absence of plutonic rocks, is considered by the authors to have also influenced the lithological structure of the formation, some of the oldest of the Silurian strata having quite as recent an aspect as the cretaceous or tertiary beds. Another point of great zoological, as well as geological, interest, connected with the singular structure of Russia, is insisted upon in the memoir. Each formation is clearly marked by its distinct suit of organic remains, even in those cases where there is no unconformability or abrupt transitions between one series of rocks and the next in succession; and, therefore, Mr. Murchison observes, that this distinction, especially in the Silurian, Devonian, carboniferous, and Permian systems, cannot be due to violent operations, which destroyed one race of animals to make way for another—and, consequently, that the theory founded on such a supposition, and deduced from the investigation of countries which present numerous instances of violent commotion and unconformability, must be greatly modified before it can be admitted. In conclusion, the authors recapitulate the evidences of the marine origin of all the regular formations to the newest tertiaries inclusive, alluding, nevertheless, to the proofs of the interruption in the sequence of the secondary strata, and the probable influence which the elevation of the central dome of Devonian rocks had in the marked difference of the characters of the formations north and south of the dividing region, and they show that the submarine condition of the surface did not terminate with the post pliocene epoch, but extended throughout the period when the superficial detritus was accumulated, and, in part, to within the historic era. Lastly, they allude to the effects produced by the operations of man on the waters of the lakes and rivers, proving incontestibly that their diminished volume is due to the felling of the forests, and the cultivation of the soil.

INSTITUTION OF CIVIL ENGINEERS.

April 26.—A paper was read "On a New Mode of Raising Ships of all Classes out of the Water for Repair," &c., by Mr. R. Mallet, of Dublin.—The plan was proposed for the purpose of replacing the graving dock and the patent slip in certain situations where such constructions were either too expensive, or an inappropriate locality prevented their adoption. The paper reviewed the principal methods hitherto in use, such as stranding by bilge ways; careening or heeling over; lifting by the camel; the graving dock; the floating dock or caisson; the screw and the hydraulic docks (both American inventions); and Morton's patent slip; it enumerated the localities for which each of these inventions was most applicable, and then described the general principle of his invention to be the diffusion of the load or strain over the greatest possible number of fixed points, and avoiding casual and unequal strains. That there should be uniform motion with a power proportioned to the resistance. In providing for this, the joggle-joint has been used throughout. The machine consists of a platform supported upon a series of frames, with joints at each end, attached at the lower ends to fixed points in the foundation, and at the upper ends to the under sill; the platform, which is traversed by a series of beams, to the ends of which are attached rods, connected with rollers, working in grooves along a suspended railway, on the cantilevers of two jetties run out to form the sides of the apparatus; a chain connected with all these rollers traverses in each suspended railway groove, and being set in motion by a steam-engine and wheel work. When the vessel is floated into the platform and made fast, the frames raise the platform and vessel gradually out of the water, permit free access all round the ship, and, when the repairs are completed, the whole is again lowered into the water.

Mr. Desroche's paper "On the Compression of Gases" gave an account of the invention of the portable gas by Mr. David Gordon, the experiments made by him, the improvements introduced into the forcing pumps, and other parts of the apparatus, and the arrangements of the gas works at London, Edinburgh, Paris, and other places. A number of drawings illustrated the communication, which contained much information interesting for the history of gas making.

Earthquake in Cornwall.—From a "report" (drawn up by Mr. Hunt, for the Polytechnic Society of Cornwall) of the particulars of the earthquake felt in Cornwall on the 17th of February last, we collect the following particulars:—In the neighbourhood of Falmouth the noise attracted attention, although but few persons felt any tremulous motion. At Penryn the disturbance was more decidedly felt; doors were shaken, and the earthenware rattled on the shelves. At Ponsanooth, and down the valley, the shock was considerable, and the first impression was, that the powder-mills in the neighbourhood had exploded. The inhabitants of the villages of Comfort and Lanner, about the junction of the granite and killas, or clay-slate, left their houses, thinking that some serious explosion had occurred at the neighbouring mine. At Carn Marth, a widow woman ran out shrieking that the side of her house was falling in. In Poldory, the shock was felt by the men working 130 fathoms below the surface. In other places it was felt even more intensely; and at Constantine doors flew open, persons were shaken in their beds, and some men working in a house ran out to know what was the matter. At Helston the disturbance was considerable; at one mine, the men at work in the 100 fathom level felt a shock, and as it were a rush of air, so much so that one of the candles was put out by it, accompanied by a noise which made them think that one of the shafts had crushed in. This appears to have been the most westerly part at which the tremor was felt, although the noise was heard farther, but in diminished force. "On referring (Mr. Hunt observes) to a geological map of the county, it will be found that the greatest effects were produced near the edge of the granite mass, which extends from the north-east to the south-west, from Carn Marth to the south of Penryn. Although it was felt at Falmouth, Helston, and other places, which are on the clay-slate, yet all my inquiries go to show that it diminished rapidly in force, as the distance from the granite increased."

Mercury in Spain.—We quote the following observations in reference to the recent lamented demise of M. M. Hamann and Aguado, from the *Morning Chronicle* of Thursday last:—"Two men raised to eminence by the acquirement and management of wealth—Hamann and Aguado—have just disappeared from life, and from the scene of their exertions. The loss of both will be severely felt. M. Aguado, keeping himself remote from politics, was still the soul of much commercial enterprise. The [illegible]

[illegible]

Metals Imported into France.—The *Moniteur* contains the returns of the principal articles of merchandize imported into France during the three first months of 1842:—The quantity of cast iron [illegible]; of copper, [illegible]; of lead, [illegible]

[illegible] E. W. BINNEY.

PROCEEDINGS OF PUBLIC COMPANIES.

BLAENAVON IRON AND COAL COMPANY.

At a meeting of the proprietors of the above company, held on the 22d inst., at the London Tavern, Bishopsgate-street, a report was read, which stated that a reduction had been made in the expenditure, by which a saving exceeding 1000*l.* per annum had been effected. The number of horses had also been lessened by upwards of fifty, and a considerable reduction in the keep of the remainder, to the extent of 15*l.* per horse per annum, had been made. The make of the furnaces had been very regular, amounting to 19,638 tons; only four furnaces were at present in blast. The result of the trading and manufacture of the past year, ending Christmas, 1841, shows a gross profit at the works of 7505*l.* 10*s.* 3*d.* Against this amount must be set the charge of interest and banking account, and discount on bills, together 3365*l.* 13*s.*—leaving 4139*l.* 10*s.* 3*d.* Against this amount, also, must be set the current expenses in London, 962*l.* 16*s.* 2*d.*; the annual proportion of 10 per cent. from the preliminary expenses, 343*l.*; interest on mortgage and debentures, 4414*l.* 6*s.* 7*d.*—leaving a balance to the debit of profit and loss of 1482*l.* 12*s.* 10*d.*—A statement of accounts from the formation of the company, in June, 1836, to Dec., 1841, was submitted, which showed that the total amount expended by the company was 645,859*l.* 17*s.* 9*d.*—The report and statement of accounts were adopted, and ordered to be printed, and three directors re-elected.—The meeting then adjourned.

SOUTH-EASTERN RAILWAY COMPANY.

A special general meeting of the proprietors of this company was held at the London Tavern, on Thursday, the 29th inst., to consider and determine on raising additional capital for the purposes of the undertaking.—Mr. Joseph Baxendale in the chair.—A statement was submitted, by which it appeared that the receipts of the company to the 1st of April were 356,745*l.*, and the total from the commencement 1,145,397*l.* 13*s.*; whilst the expenditure amounted to 312,977*l.* for the half-year, and the total to 1 075,468*l.* 5*s.* 4*d.*—leaving a balance, after some other deductions, of 62,461*l.* 5*s.* 8*d.*—The Chairman said, that in addition to the above total expenditure, the additional sum required would amount to 1,545,000*l.*, and was made up as follows:—Cash balance, 70,000*l.*; engagements, 35,000*l.*; debentures, 360,000*l.*; sum proposed to be raised, 700,000*l.*; the sum the company has power to borrow, 260,000*l.*; and that under the London-bridge Station Act, 120,000*l.*; which would leave a margin ample for all that might be required. From this the amount due to the Brighton Company (said by them to amount to 350,000*l.*) would be taken. The distance that would be opened in the month of May would be forty miles; eight to Croydon, one on the joint or Brighton line, and twenty miles on the South-Eastern line. In the month of August fifteen miles further would be opened, in November eleven miles further, making the whole distance, from the metropolis, of sixty-six miles. After this preliminary, he submitted a resolution for raising an additional capital of 700,000*l.*, by the issue of 28,000 new shares, for 50*l.* each nominally, 25*l.* each in cash only being required, and also several other resolutions, which were carried unanimously.—In reply to Mr. Tyrrell and other proprietors, the Chairman stated the loss by shares to the company was about 235,000*l.*, and that the directors still remained of opinion that the line would ultimately not cost more than 30,000*l.* per mile.—After some discussion on the affairs of the company by Mr. Moxon, Mr. Levy, Mr. Parsons, and, others, Mr. Morley and another gentleman from France explained to the meeting the project of a railway from Calais to Paris, and one from Boulogne to Paris; which was preferable, however, was not yet decided by the Chamber of Deputies. Mr. Parsons and others spoke much in favour of a line from Calais to Paris, and thought an opinion of the kind expressed in a resolution would be advisable; but it was overruled by the other proprietors, and after a vote of thanks had been passed to the chairman and directors, the meeting adjourned.

Ald. Thomas Wood and the Mayoralty.—Active measures are, we understand, being taken to secure—what must be the wish of all honest men—the rejection of Alderman Thomas Wood (chairman and solicitor of the Talsarn Iron and Coal Company) from filling the civic chair for the ensuing year. For be the wish from us, to endeavour, by any observations of ours, to thwart the honest citizen from raising himself to the pinnacle of civic glory, but, when we find a man convicted of acts that have been the means, not only of creating distrust in the minds of all connected with commercial undertakings, but of spreading ruin and desolation among those who unfortunately have been the dupes to his specious intrigues, we do hope, nay, believe, that there will be found a sufficient number of independent citizens to rescue London from the stigma of being represented by one whose conduct has been so often exposed through the medium of our columns. Sir J. Pirie, the present deservedly popular representative of civic dignity, has, we regret to say, declined to serve a second time; but, we have yet reason to believe, there is to be found one respected Alderman on the rota who will prove himself willing and worthy to sustain the high character that for ages the City of London has maintained from the pollution that apparently awaits it.

The Iron Trade.—A meeting of the Yorkshire and Derbyshire ironmasters was held at the Normanstown station on Thursday, to take into consideration the present very depressed state of the trade, and to adopt some immediate measures in alleviation. A resolution was passed in January, at a general meeting of ironmasters, for each to submit to a reduction in the make, by a certain per centage on every concern, according to the number of furnaces in blast; which, had it been strictly complied with, would have had a salutary check in reducing the stocks on hand, and in some measure prevented the manufacturer submitting to these unremunerating prices at which metal is now selling, the evil of which is increased by Scotch's imports coast from Scotland.—*Sheffield Iris.*

Manufacture of Iron.—A paper, recently read by M. Ebelhem, respecting the manufacture of iron at the French Academy of Sciences, was reported on, by M. Chevreuil, on the 28th ult. M. Ebelhem's paper was principally on the construction of blast furnaces, &c.; the author states that he is satisfied, from a series of experiments, that the present mode of constructing furnaces is as near to perfection as possible, but that only two thirds of the combustibles employed pass off in gas, and that there would be great economy and advantage in a contrivance for preserving this gas, and making use of it in the process of smelting. The paper, however, leaves the question of the precise and best mode of obtaining this result still doubtful.

Aluminate of Copper.—M. Lassaigne has forwarded a communication to the Academy of Sciences, Paris, on a new compound of alumina and the binoxide of copper (aluminate of copper), of a violet colour, soluble cold, resisting the first impressions of a temperature of 100 degrees. It differs from several compounds of this metal by its slight smell, and by the absence of a styptic taste. Dried in vacuo, it redissolves in cold water. The alkaline carbonates and bicarbonates render soluble the oxide of copper in alkanets. Fibrin, dissolved by the acetate of potash, conducts itself as albumen. This character shows an analogy between these insoluble substances. This, as well as several other papers, was referred for examination and report.

Carburetted Hydrogen Engaged in Spheres of Carbonate of Lime.—A short time since my attention was attracted by a few small white particles which had collected on some gas light burners, and which on examination I was much surprised to find were lime. The burners were more than a mile from the works, and I was satisfied it could have proceeded only from the purifiers, which contain lime. Pursuing the inquiry, I have discovered a great number of hollow spherical bodies, formed of carbonate of lime, and filled with carburetted hydrogen. They are from one fortieth to one-twentieth of an inch in diameter, and, the crust or shell being thin, they are easily conveyed, by the current of gas flowing through the pipes, even to burners in chambers more than a mile distant.—*Correspondent of Silliman's American Journal of Science and Arts.*

Fall of a Meteoric Stone at Gargenden, in Silesia.—On the 14th of March, 1841, at 3½ p.m., the inhabitants of Heinrichau, who were then in the fields, heard three heavy reports like thunder-claps in the air, and soon after a whizzing noise, which ended in a sound like that of a heavy body falling to the ground. The sky at the time was almost perfectly clear. Some persons went in the direction from which the sound came, and, after proceeding about one hundred and fifty paces, found a small hole in the earth, at the bottom of which, about half a foot below the surface, they found the stone which had just fallen. The stone (which is of the form of a four-sided pyramid) is evidently a fragment of a larger mass which burst in the air; three of its sides are broken, the fourth is covered by the thin black crust peculiar to meteorites. It weighs two

MINING CORRESPONDENCE.

ENGLISH MINES.

HOLMBUSH MINING COMPANY.

April 25.—I beg leave to inform you that the lode in the 110 fathom level, west of Forest's winze, is six inches wide, and worth 4*l.* per fathom; in this level, east of Dingle's shaft, the lode is seven inches wide, and worth 6*l.* per fathom. In the 100 fathom level west the lode is still divided into two parts, each being about seven inches wide, and worth, together, about 10*l.* per fathom; in this level east no alterations worthy of remark; the lode in the eastern stopes, in the back of this level, is eighteen inches wide, and worth 32*l.* per fathom; the lode in the western stopes, in the back of ditto, is two feet wide, and worth 50*l.* per fathom. In the ninety fathom level west the lode is twenty inches wide, and worth 35*l.* per fathom; the lode in the eastern stopes, in the back of this level, is eighteen inches wide, and worth 25*l.* per fathom; the lode in the middle stopes, in the back of this level, is still about sixteen inches wide, and worth 28*l.* per fathom; in the western stopes, in the back of ditto, the lode is fourteen inches wide, and worth 20*l.* per fathom. In the eighty fathom level east the lode is divided into small branches; the lode in the stopes, in the back of this level, continues about eighteen inches wide, and worth 32*l.* per fathom. The lode in the sixty-two fathom level, east of Bray's shaft, is eight inches wide, and unproductive; the level west of Hitchins's shaft, on the north lode, the lode is sixteen inches wide, and producing good stones of ore, with a kindly appearance. The tribute pitches are still looking favourable. F. Phillips.

UNITED HILLS MINING COMPANY.

April 26.—Williams's Shaft—No lode broken for the past week. Sixty Fathom Level, Eastern End—Lode four feet wide, two and a half feet ore of fair quality; western end, lode five feet wide, producing a small quantity of good ore. Fifty Fathom Level—In driving west of Diagonal shaft the lode is six feet wide, coarse in quality. In the stopes, east of eastern shaft, the lode is three feet wide, two feet very good ore. East of James's Shaft—Lode two and a half feet wide, eighteen inches good ore. Diagonal Shaft—In this shaft the lode is four feet wide, eighteen inches on the south part producing ore. Forty-six Fathom Level, Eastern End—Lode eighteen inches wide, with stones of ore; western end, lode large and coarse. Forty Fathom Level—Lode eighteen inches wide, six inches on the north part ore of good quality. Thirty Fathom Level—Lode fifteen inches wide, producing some ore, but very much corrupted with mundic. Twenty Fathom Level—Lode two and a half feet wide, of a promising appearance, but not producing much ore. Nicholas Langdon.

TRELEIGH CONSOLS MINING COMPANY.

April 23.—The seventy east and west, at Christoe, are unaltered, and the sixty east and west continue with but little change in their appearance. The fifty west continues in a good lode, worth 35*l.* per fathom. The tribute department generally, in this part, continues to look well; the men are working regularly, and getting fair wages. At Good Fortune the forty-four east is improved, the lode being worth 8*l.* per fathom, but all other places continue the same as last reported. W. Sincock.

WEST WHEAL JEWEL MINING ASSOCIATION.

April 25.—The ground in Buckingham's engine-shaft, below the seventy, continues favourable. The seventy east, on Wheal Jewel lode, is looking more promising than last week. The seventy east, on the south branch, is ten inches wide, containing good stones of ore. The fifty-seven east, on Wheal Jewel lode, is worth 12*l.* per fathom, and the winze sinking under this level is worth 15*l.* per fathom. The fifty-seven east, on the south branch, is worth 7*l.* per fathom. S. Lean.

TREGOLLAN MINING COMPANY.

April 25.—The lode going east, at the forty fathom level, is eight feet wide, and producing ore on the north part worth 8*l.* per fathom. In the cross-cut, going north at this level, we have done but little during the past week, the men having been engaged in doing some work in Baker's shaft—consequently, I have nothing new to report. We have holed the rise from the forty to the thirty fathom levels, whereby we have derived considerable benefit from ventilation. We are getting on favourably in fixing the new machinery, and hope shortly to be able to commence sinking below the forty fathom level. The present appearances of the tribute pitches are much as usual. We intend sampling on Monday next about fifty-five tons of copper ore. James Nibbis.

TRETOIL MINING COMPANY.

April 25.—The lode in the forty fathom level, east of engine-shaft, is ten inches wide, producing some good ore. The lode in the winze, sinking under the thirty fathom level, east of Williams's shaft, is twenty inches wide, very good tribute ground. The lode in the thirty fathom level, east of Williams's shaft, is small and unproductive. The lode in the stopes, in the back of this level, is very good. The lode in the twenty fathom level, east of Williams's shaft, is fifteen inches wide, producing a little ore. The operations in the new shaft go on speedily. H. Williams. J. Morcom.

CORNUBIAN MINING COMPANY.

April 25.—The engine-shaft is sunk under the sixty fathom level two fathoms, and the ground is rather of a hard nature; in the end, driving west at this level, the Culverton lode is still of a promising nature, it is about two feet wide, and the ground about the lode is favourable for driving through; this level is now extended west of the engine-shaft thirty-five fathoms; we have communicated a winze from this level to the fifty, which will greatly ventilate the sixty fathom, and as well as a necessary footway; we have now commenced extending a level east on the north lode. At the fifty fathom level cross-cut south we expect to drive some distance further before we prove the lode noticed to have been discovered between the fifty and forty fathom levels. At Murray's we have an alteration in the ground in the shaft sinking below the sixteen fathom level, nor in the lode in the winze sinking below that level. At Clifford's twenty-four fathom level, going east, the north lode is about two feet wide, and has a very promising appearance, producing of late some lead ore. At the sixteen fathom level, going east, the lode is much of the same character and encouraging appearance as in the twenty-four fathom level. In taking a general survey of the tribute department, I see nothing to report on different to what we reported to you on the 11th inst. We sampled on Thursday last, 21st inst., computed fifty-six tons. R. Rowe.

ROSE-DOWN MINING COMPANY.

April 26.—In my last report, of the 21st ult., I stated that we should commence to cross-cut north from the western adit end to cut through the leading part of the lode; I beg now to report that, since that time, we have driven three fathoms in that direction (north), and find the strata to be a hard capel, granite, spar, gossan, &c., mixed with mundic and spots of copper ore. In the present end, still going north, there is a soft kind of peach, thickly interspersed with mundic and some spots of copper, but cannot say that it is altogether of a very encouraging nature. I have, however, thought it advisable to drive a few feet further, to ascertain whether or not there may be yet the leader part of the lode before us, and when that work is accomplished I will report to you the result. R. Rowe.

REDMOOR CONSOLIDATED MINING COMPANY.

April 25.—I beg to inform you that at the sixty fathom level going north the lode is small, not exceeding three inches in width, which, however, is rich for silver-lead ore. In the south end, at this level, the lode is from six to eight inches wide, yielding only a small portion of lead ore. The lode in the south end, at the fifty fathom level, is two inches wide, composed of spar, flucans, and lead; going north, at this level, the lode is about eight inches in width, producing some good work. The copper lode going east, at this level, is eighteen inches wide, and much of the same character as last reported; in the west end the lode is fifteen inches wide, producing abundance of mundic, spar, jack, and stones of ore. Driving south, at the forty fathom level, the ground is hard; the lode is four inches big, carrying a small branch of rich silver-lead ore. F. R. Rowe.

TAMAR SILVER-LEAD MINING COMPANY.

April 25.—Next Saturday being our regular monthly setting, when I shall give you a more detailed report. I have only to say at present that the mine on the whole still continues encouraging, and that we have sampled two parcels of silver-lead ore, computed 65½ tons—No. 1, 61 tons, No. 2, 20½ tons—and have fixed on Saturday, the 7th of May, for the sale, samples of which have been forwarded to the different purchasers. J. Spargus.

FOREIGN MINES.

Falmouth, April 26.—The *Magnet* packet, Lieut. G. Ellis, arrived with the Brazilian mails. She sailed from Rio de Janeiro 23d February, and has brought about 18,000*l.* on freight in gold, gold dust, and diamonds.

UNITED MEXICAN MINING ASSOCIATION.

Guanaxuato, Feb. 13.—I beg leave to refer to the inclosed duplicates of my last letters to the court, dated the 21st and 28th of January, and to send to you herewith the following documents in original, &c.:—

Mine of Rayas and Bue Contract.—By my last letter to the court, dated the 28th ult., I transmitted copy of the arrangement entered into between the association and the owners, establishing the amount and mode of dividing and appropriating the mine profits, applicable to the payment of the debt in favour of the company. The governor of Guanaxuato having returned to his post, I have obtained an order from him for the payment to the association of each portion of profits to the 31 here in the mine held by the "interessen publico," as are applicable to the payment of the general debt, and in virtue thereof I have received the sum of $1496 1 4, alluded to in my last letter—making $15,897 7 5, the amount corresponding to the 18½ here of the mine assigned for this purpose, as the realised profits from the 30th October to the 31st December last. In succession to the said assigned the profits of the last past month—that is, from the 2d to the 29th January—have been ascertained to be $4945 4, and another division and appropriation having been made, the association is entitled to $2556 6 6, now in course of being received. The amount of $4945 4 proceeds from the following returns:—

	Mine sales.	Hacienda sales.	Total.	Amt. remeria.	Net surplus.
Jan. 8.....	$1 20 7 6.....	$ 7 7 5 6.....	$2028 4 6.....	$1507 2 6.....	$ 451 2 0
„ 15.....	2153 3 6.....	2979 0 0.....	5328 3 6.....	3210 0 1.....	2118 2 7
„ 22.....	2196 3 0.....	2341 4 5.....	4536 7 5.....	3489 7 6.....	1027 1 0
„ 29.....	2161 5 6.....	2334 6 0.....	4496 3 6.....	3344 5 5.....	151 5 3
				Total.....	$4945 4 0

The returns in the subsequent week, say that ending the 5th of February, shows a net surplus of $1536 1 2, and those to yesterday's date are not yet known, as the accounts at the mine are still open. I do not hear that any particular variation has taken place in the various productive workings since my last dispatch to the court, nor am I enabled to add one word on the present occasion worthy of notice in respect of the prospects for a new contract, but the subject commands my constant attention, and, notwithstanding all the opposition met with, I still entertain great hopes of success ere long.

Remittances.—The Tampico conducta, which left hence last month, reached San Luis Potosi in safety, and having left thence on the 29th ult., I presume will reach Tampico in time for the shipment of our funds by the return December packet, Crane. By the next Tampico conducta, which it is expected will leave hence the end of March or beginning of April, I shall forward such amount of specie, for ultimate shipment to the directors, as I can then conveniently spare from my ways and means, and which, I believe, will not fall short of $30,000. J. N. Shoolbred.

Note.—The sum of $18,800 was received by the *Crane* packet, which arrived at Falmouth on the 1st instant, and which is the promised remittance (less charges in Mexico) of the $20,000 mentioned in Mr. Shoolbred's letter of the 21st January. John Mather, Sec.

ANGLO-MEXICAN MINING COMPANY.

Guanaxuato, Feb. 7.—Asuncion continues to prosper. It has been found necessary to suspend the south-east level from San Juan because water began to show itself, though with much regret, arising from its promising appearance. In the Cedro there is no change of any importance. The inclined shaft being now further advanced towards its conclusion, a work some time ago contemplated has been begun—a level from the plan of San José to the south-east, so as to get under the pozo of St. Augustin, where there is reason to suppose ore may be met with.

IMPERIAL BRAZILIAN MINING ASSOCIATION.

Gold Returns.—From the 13th to the 22d of January, 27 lbs. 9 oz. 7 dwts.—Total, from the 1st to the 22d of January, 31 lbs. 5 oz. 5 dwts.

Gongo, Feb. 7.—I received from Mr. Duval, on the 5th inst., the charge of your affairs in this province. The transfer of Mr. Duval's powers to me, and of the property of the association, was effected with that harmony and good feeling which the importance of the subject demanded.

I. K. A. Criechtt.

P.S.—A box and a half of "work" is now clearing up in the workshouse, which will give about 5 lbs. of gold.

Rio, Feb. 21.—I have the pleasure of informing you, that we received, on the 16th inst., from the Government, the second payment on account of the deposit in the same proportion of stock and currency, and at the same calculation as the first payment, and we trust, on the 16th proximo, to receive the final instalment. Naylor, Brothers, & Co.

Gold Report.—Received from Jan. 24 to Feb. 2 (nine days), 23 lbs. 8 oz. 1 dwt. 12 grs.—Total, from Jan. 1 to Feb. 2, 75 lbs. 1 oz. 6 dwt. 12 grs.

BRAZILIAN COMPANY.

Cata Branca, Jan. 19.—The enclosed gold report is still under the mark, which is attributable to the cause assigned for the deficiency of that of last week. Having now got rid of the rubbish, I trust that the next will be better.

Jan. 24.—The improved gold report for the past week clearly proves that the low amount of the two preceding weeks was not caused by the lode being of less value. We have just commenced working the extreme western ground, which, as giving us a portion of the Olho Fino, will, I hope, still improve our returns.

Jan. 26.—The great quantity of lode which has lately been taken out of the mine must, I think, have astonished you as it has me. For the last fortnight two tons a-day have been sent out, and that by about ninety men only. The ground, unquestionably, is more easily bored, and bears better, indeed, we have a-thing to wish for but a little improvement in its value. At St. Antonio we are still driving upon the lode; it continues to promise satisfactorily, and I have no doubt that, when all is in order, its produce, with that of the other lodes in the same ridge, will materially help us. It is my intention, with all possible expedition, to bring the whole of the lodes into a state of working; and to this end all the force that can be spared from keeping the stamps supplied shall be applied—a portion to take up a deep level (begun by the former proprietors) to lode No. 6, which, as you have been informed, is a very large one; the level will cut it at a depth to give us directly twenty-seven fathoms of backs, and which, as the hill is abrupt, will increase considerably every fathom we gain west; it, of course, remains to be proved what is the value of the lode; but being of the same nature as that of Cata Branca, and showing fair specimens at surface, it is only reasonable to presume that it will be found valuable; nothing will be more easy than the extraction of the stone, and as the level is on a line with the hopper of No. 5 stamping-engine, and not distant, a tramroad may be laid, by which it may be sent into it. The remainder of the hands will proceed with getting the St. Antonio lodes in order, beginning with the lode, or No. 9. Of an old deep level, although by the former proprietors, upon a trifling line, on the western side of the reign, and crossing all the lodes to the house of their richest ores, we have cleared up 145 fathoms; it is yet short of the lode; the southernmost lode seventy fathoms, under the bottoms of which (our workings) it will come in three fathoms; and these, we suppose, eleven fathoms under the old ones, and it will at once afford us the means of drainage, with not any trouble or expense, and of extraction, with very little of either. We shall have directly many fathoms of backs, and the same level will afford the like facilities for working, &c., every lode traversing the Serra—seven in number. How long it will take to complete the levels I cannot say, for, although it is upon a clay slate vein, it is at present rather hard. In a little while I shall be able to give you an opinion more to be depended upon. All those lodes have been extensively worked, as far as it could only have been done at immense trouble and expense from their imperfect means, which will not apply to us; they must have been rich. Directly the level alluded to is finished, I should say almost any number of stamping engines might be kept. Those lodes, too, from not being of the gigantic size of Cata Branca, may be much more easily and securely worked. The enormous timber required for the latter (in some cases thirty feet to thirty-six feet long and two feet diameter), rendering the efficiently securing it very laborious.

Feb. 6.—I regret to say that, in consequence of the extreme drought, very extraordinary at this season, as well as an unusual number of accidents to the pumps, the bottoms have been much under water, and the stamps have, consequently, fallen very short of the usual supply. We shall be subject to this annoyance till the new engine is ready, upon which all possible haste is now employed.

W. Curnow.

	£ s. d.	dwt. gr.
Gold return for four weeks, to the 6th of February	74 0 17	5
Ditto for the month of January	80 0 14	11

MINING NOTICES.

New Quicksilver Mines.—A correspondent writes from Florence that the mine of quicksilver, discovered last year in the environs of Pereccio, near Pisa, is in full work, and during the last month yielded more than 6000 lbs.—a produce that is daily increasing. The Grand Duke had visited them, and expressed his satisfaction at the able manner in which they had been conducted, announcing the intended appointment of a commission of French, English, Italian, and German geologists and chemists, to search for the other mines of quicksilver, which, according to tradition, exist in the Grand Duchy.—*Morning Chronicle.*

MINE ACCIDENTS.

Dean Moelfa's Quarry, Ivey.—An accident occurred on Thursday, at Ivey, in a quarry called the Dean Moelfa, which caused the death of four men, and inflicted serious injury on three others. The wall of the shaft through which the stones are brought to the surface gave way, and caused a rapid ascension of counter-action to the wheel, which broke in pieces. The men engaged in working it were thrown thirty yards off, and wounded, whilst the load falling on those below killed them instantaneously.

West Cardon Mine.—A miner, named Lobey, fell down the shaft at West Cardon Mine, on Saturday last, and although he fell nearly twenty fathoms no bones were broken, although, as may be supposed, he was dreadfully bruised.

Maggie Mine, Derbyshire.—On Monday last M. Newbold was winding up a heavy pipe from the bottom of the Maggie Mine, when the windlass overpowered him, and, before he could extricate himself, he received two severe blows from the handle, by which one eye was completely knocked out, and his life is considered in great danger.

Powell's Colliery, Aberdare.—At the colliery of T. Powell, Esq., at Tir Founder, Aberdare, there is a pit scarcely yards deep; and on two of the collars, J. James and S. Duncan, were descending in the basket, on Thursday, the 7th inst., the chain by which it was suspended slipped when within two yards of the top. James jumped from the basket and clung to a rope which was suspending to the pit, where he remained until assisted; Duncan was precipitated to the bottom, where he was found very much bruised, but not materially injured.

Clay Cross Colliery.—Last week R. M'Lellan was seriously injured while at work in one of his coal pits, by a quantity of "bind" falling on him from the roof.

Duke Pit, Whitehaven.—On Tuesday week an explosion of hydrogen gas took place in Duke Pit, near Whitehaven, the property of the Earl of Lonsdale, by which one man, named J. Bateman, was so severely burned that he died the following evening, and another greatly scorched about the head and shoulders, but not so as to place his life in dangerous peril (A. M'Cabe) had his clothes on at the time of the accident, and was thus, in some mea-

MONEY MARKET AND CITY NEWS.

CURRENT PRICES OF ENGLISH AND FOREIGN FUNDS.

Consols Money, 92⅞	Dutch, 2½ per Cent., 52⅞ ¾
Ditto Account, 92⅞	Ditto, 5 per Cent., 101⅛ ⅞
New 3½ per Cents., 100⅞ 1	Portuguese, 5 per Cent., 38⅞ 9
Exchequer Bills, 38 40 pm.	Ditto, 3 per Cent., 22⅞ ¾
Belgian Bonds, 5 per Cent., 102⅞ 4½	Spanish, Actives, 5 per Cent., 24⅞ ⅞
Brazil, 5 per Cent., 67⅛ 8	Chili, 6 per Cent., 75 6
Danish, 3 per Cent., 80⅞ 1⅛	Colombian, 6 per Cent., 26⅞ 7
Russian, 5 per Cent., 113 ⅛	Mexican, 5 per Cent., 34⅞ ⅞

REMARKS ON THE OPERATIONS OF THE WEEK.

SATURDAY, April 23.—The national securities advanced about ⅛ per cent., the closing rates of Consols being, for Money, 91⅞ ⅞, and for the Account, 91⅞ 2; Bank Stock, 166; India Stock, 246 8; and Exchequer Bills, 37s. 39s. pm.—But few transactions took place in the foreign funds; the Peninsular and Continental stocks were without alteration, and Mexican receded ¼ per cent.; the other securities are nearly stationary.—The share market was firm at former quotations.—In mining shares, Bolanos (scrip) were done at 61 ⅞; Brazilian Macaubas and Cocaes United, 4¼; United Mexican (new scrip), 3½.—In joint-stock banks, Australasian Bank, 51⅞ ex div.; Colonial Bank, 20⅞; London and Westminster, 22 1⅛; and Union of Australia, 29½.

MONDAY.—Business continues active in the English funds, and prices still on the advance; Consols for the Account closed at 92⅛ ¼, and for Money 91⅞ 2⅛; South Sea Old Annuities, 90⅞; India Bonds, 19s. pm.; and Exchequer Bills, 38s. 40s. pm.—In the foreign market transactions were exceedingly limited, and unattended by any fluctuation of consequence.—There was some animation in the share market; the chief business was in the lately-opened Edinburgh and Glasgow, which fluctuated between 32⅞ 3¼; the Manchester and Leeds were also in request at from 19 to 21 per share; the market for Brightons was flat at 37⅛ ¼; Birminghams, 179 81; Great Western, 94 3¼; Blackwalls, 12⅛ per share; South-Westerns, 61⅛ ⅞; Eastern Counties, new, 5⅞; Greenwich, 6; and Croydon, 14.—In mining shares Anglo-Mexican Subscription Mine, 3; Bolanos Scrip, 6⅛ ⅞; Brazilian Macaubas and Cocaes United, 4¼; and United Mexican (new scrip) were quoted 3¼.—London Joint-Stock Bank, 17⅞; London and Westminster, 22¼; Union of London, 9⅞ 10⅛; and Canada Bank, 30½.

TUESDAY.—The English funds continue to advance, with every prospect of permanent buoyancy, there being more money than stock in the market. The jobbers are strong buyers, the demand for actual investment being still on the increase. With the news from Paris the advice of the sudden demise of M. Humann, the French Minister of Finance, was received. Consols for Money closed 92⅞ ¼; and for the Account, 92⅛ ⅜; India Bonds, 20s. 21s. pm.; Bank Stock, 166 7; India Stock, 246 7; South Sea New Annuities, 91⅛; and Exchequer Bills, 38s. 40s. pm.—In foreign stocks, although not much doing, the quotations were firm, with a slight improvement in those of the more substantial order.—The share market was steady, and prices are without alteration.—Cobre Copper Mining Company, 35⅞ ⅛ ¼.—National Provincial Bank of England, 38 ¼.

The amount of business transacted in the foreign exchanges was not to any large extent. There was a better supply of bills upon Hamburgh than on the preceding post, and the rate was rather higher. The price for Amsterdam and Paris was about the same as on Friday.

The premium on gold at Paris is 10 per' mille, which, at the English Mint price of 3l. 17s. 10½d. per ounce for standard gold, gives an exchange of 25 40¾, and the exchange at Paris on London at short being 25 62½, it follows that gold is 0·90 per cent. dearer in London than in Paris.

By advices from Hamburgh the price of gold is 434 per mark, which, at the English Mint price of 3l. 17s. 10½d. per ounce for standard gold, gives an exchange of 13·31, and the exchange at Hamburgh on London at short being 13·11¼, it follows that gold is 0·93 per cent. dearer in London than in Hamburgh.

The course of exchange at New York on London is 107 per cent., and the par of exchange between England and America being 109 25-40 per cent., it follows that the exchange is 2·37 per cent. against England. But the quoted exchange at New York being for bills at sixty days' sight, the interest must be deducted from the above difference.

WEDNESDAY.—The English stocks fully maintained their late improved rates, at which a large amount of business was transacted; Consols for Money closed 92⅞ buyers, and for the Account 92⅞; Exchequer Bills, 39s. 41s. pm.; India Stock, 247½ 8; India Bonds, 19s. 21s. pm.; and Bank Stock, 166½ 7½.—No alteration in foreign funds, in which very little business was done.—Less activity was exhibited in the share market, and the quotations of some of the lines were at rather a depressed rate; Brightons were 36⅞ ¼; Birminghams, 181 80; Great Westerns, 93⅞ ⅞; South-Westerns, 61⅞; Blackwalls, 12⅛ ¼; Edinburgh and Glasgow, 34¼; Greenwich, 5⅞; and Croydon, 13⅞ 14.—Cata Branca Mining Association, 5¼; and Real del Monte (unregistered), 3⅞.—London and Westminster Bank, 21⅞; National Provincial Bank of England, 35 ⅞; and Union of Australia, new, 5⅞.

THURSDAY.—The extremely satisfactory state of the English stock market was well kept up, for, notwithstanding a sale by the Bank broker of money stock (about 200,000l.), which gave a temporary check, the funds took a more extraordinary rise than has been witnessed on any day since the advance commenced, which, with scarcely a reaction, has now been going on for the last fortnight, from 91⅞ Money, and 9 ⅛ Account, at which Consols left off yesterday, they closed to-day at 93⅞ Money, and 93⅞ ⅛ for Account—an improvement equal to ⅞ per cent.; Bank and India Stock were better, but Exchequer Bills remained the same.—There was a trifling improvement in Portuguese Stock, but the foreign securities generally have not participated in the rise which has taken place in the English funds.—This was settling day, of account, in railway shares; in most lines there was an improvement in quotations, and in all a more active demand for shares.—Australasian Bank, 51⅞; Colonial, 20⅞; London and Westminster, 21⅞ ⅞; Provincial Bank of Ireland, new, 15 16; Union of Australia, 29⅞ ⅛; ditto, new, 5⅞.

FRIDAY.—The advance in the prices of English securities received a slight check to-day, caused, it was said, by some sales effected on Chancery and private account; the reaction, however, which occurred (at most not more than ⅛ per cent.), is a trifle compared with the great improvement lately made in prices. Consols for Money were quoted, at the close of business, 92⅞ ⅞; and for the Account, 92⅞ buyers; Exchequer Bills, 38s. 40s. pm.; Bank Stock, 167 168; India Stock, 248 249; India Bonds, 20s. 22s. pm.—The prices of foreign securities remained unaltered. The half-monthly account presented no feature of moment; cash was plentiful at 3 per cent., and all differences were regularly and satisfactorily adjusted.—Money was also very easy in the share settlement, accounted for, in a measure, by the very strong rumour current that the Bank directors have lent out 600,000l. at interest on railway debentures.—The issue of new shares for the completion of the South Eastern and Dover line had a beneficial effect, and also slightly improved the value of Brightons. The Birmingham line also improved 1l. per share, and the share market, altogether, presented a very firm appearance.—Cobre Copper Mining Company, 34⅞.—Union Bank of Australia, new shares, 5⅞.—Mexican and South American Company, 4⅞.

There was a fair amount of business doing in the foreign exchanges. Owing to a greater demand for bills upon Amsterdam, the rate on that place was slightly depressed. Hamburgh and Paris may be considered the same as last post.

From a Parliamentary return just issued it appears that the total amount of loans advanced by the commissioners for the issue of Exchequer Bills for public works, &c., from June 17th, 1817 (the date of the commission), to the 31st of December, 1841, for various undertakings, was 6,063,161l. Of this amount the Thames Tunnel forms no inconsiderable item, no less than 314,000l. having been advanced for the carrying on of that concern. The sum of 440,000l. was advanced to railways.

BANK OF ENGLAND.—Quarterly Average of the Weekly Liabilities and Assets, from the 1st of February to the 23d of April, 1842, both inclusive:—

LIABILITIES.		ASSETS.	
Circulation	£17,331,000	Securities	£21,926,000
Deposits	9,[illegible]	Bullion	6,[illegible]
	£26,[illegible]		£28,[illegible]

Downing street, April [illegible]

[From our own correspondents.]

PARIS, April 28.—[illegible]

LATEST PRICES OF IRISH STOCKS.—[illegible]

LEEDS, Thursday.—[illegible]

[illegible] W. WATSON & Co.

HULL, Thursday.—[illegible]

NEWCASTLE, Friday.—Our share market, in general, is firm, a good demand existing for Great North of England Railway shares, and also for shares of some of the local banks. Brandling Junction Railway shares are offered at lower rates.—North of England Joint-Stock Bank, 4½l.; Northumberland and Durham District, 8l.; Newcastle, Shields, and Sunderland Union 8l.; Newcastle upon-Tyne Joint-Stock, 3l.; Newcastle Commercial, 9l.; Sunderland Joint-Stock, 6l.; Darlington District, 4l.; Carlisle City and District, 30l.; Carlisle and Cumberland, 6½l.; Stockton and Durham County, 6¼.—Newcastle and Carlisle Railway, 92l.; Newcastle and North Shields, 42l.; Brandling Junction, 41l.; Durham and Sunderland, 19½l.; Clarence, 20l.; Hartlepool and Stockton, 35l.; Hartlepool Dock and Railway, 100l.; Great North of England, 88l.—Newcastle Union Shipping Company, 3l.; Port of Newcastle, 15l.; London, Newcastle, and South Shields, 5l.; Gateshead and Tyne, 17l.—North and South Shields Steam Ferry, 110l.—Newcastle Subscription Water Company, 30l.—Newcastle and Gateshead Union Gas Company, 7½l.—Durham County Coal Company, 10l.

BRISTOL, Friday.—Business continues very limited in this market, but firm at my quotations.—Great Western Railway, 94l. to 95l.; halves, 64½l. to 65l. fifths, 10½l. to 10⅞l.; Bristol and Exeter, 43l. to 44l.; Bristol and Gloucester, 5l. to 6l.; Birmingham and Gloucester, 55l. to 57l.; Birmingham and Derby, 50l. to 51l.; Cheltenham Union, 17½l. to 19½l.; London and Brighton, 36½l. to 36½l.; Taff Vale, 60l. to 62l.—Bristol Gas Company, 32l. to 33l.; Clifton, 24l. to 25l.

EDINBURGH, Wednesday.—Edinburgh and Glasgow Railway, 33l.; Dalkeith and Edinburgh, 30l.; Glasgow and Greenock, 23l.; Glasgow and Garnkirk, 40l.; Glasgow and Ayrshire, 36½l.; Wishaw and Coltness, 38l.; Dundee and Arbroath, 23½l.; Arbroath and Forfar, 22l.

GLASGOW, Wednesday.—Ballochney Railway, 65l.; Dundee and Arbroath, 23½l.; Edinburgh and Glasgow, 33½l.; Garnkirk and Glasgow, 40l.; Glasgow and Greenock, 22½l.; Glasgow, Paisley, Kilmarnock, and Ayr, 36½l.; Monkland and Kirkintilloch, 57l.; Slamannan, 25l.; Wishaw and Coltness, 38l.

LIVERPOOL, Friday.—Grand Junction Railway, 186l.; Lancaster and Preston, 39½l.; Liverpool and Manchester, 187½l.; North Union, 72½l.; Paris and Rouen, 10⅞l.; York and North Midland, 94l.—Albion Bank, 20½l.; Borough, 13½l.; Bank of Liverpool, 19½l.; Liverpool Banking Company, 8l.; Manchester and Liverpool District, 10⅞l.; North and South Wales, 4½l.; Royal, 62½l.; South Lancashire, 6l.; Union, 11½l.

MANCHESTER, Thursday.—Manchester and Birmingham Railway, 28½l.; Manchester, Bolton, and Bury, 50½l.; Manchester and Leeds Railway, 87½l.—Bank of Manchester, 4½l.; Stockport, 7½l.; Manchester and Liverpool District, 10⅞l.; Manchester and Salford, 10½l.; South Lancashire, 6l.; Union of Manchester, 6⅞l.—Manchester Fire and Life Assurance Company, 9½l.—Union Plate Glass Company, 6l.

BIRMINGHAM, Thursday.—London and Birmingham Railway, 179l. to 180l.; London and Brighton, 36l. to 36½l.; London and South-Western, 61l. to 62l.; Great Western, 93l. to 95l.; Birmingham and Derby, 51l. to 52l.; Birmingham and Gloucester, 56l. to 57l.—Birmingham Banking Company, 19l.; Birmingham and Midland, 32½l.; Birmingham and Staffordshire, 7½l.

SALE OF COPPER ORES IN CORNWALL

Sampled April 13, and Sold at Andrew's Hotel, Redruth, April 28.

Mines.	Tons.	Price.	Purchasers.	Mines.	Tons.	Price.	Purchasers.
United M.	147	£6 0 6	English Co.	Hallenbeag	40	5 3 6	Vivians.
ditto	126	4 14 6	—	ditto	34	1 7 6	P. Grenfells.
ditto	128	5 11 0	Nevill & Co.	N. Downs	103	4 11 0	Williams.
ditto	122	6 13 6	Vivians.	ditto	90	9 7 6	—
ditto	96	4 17 6	—	ditto	44	4 16 0	—
ditto	56	4 17 6	English Co.	ditto	42	6 14 0	—
ditto	107	5 6 6	Vivians.	ditto	17	5 4 6	—
ditto	44½	5 5 6	—	Trewavas	90	7 8 0	—
ditto	44½	5 5 0	P. Grenfells.	ditto	76	4 9 0	Vivians.
ditto	100	4 19 0	Freemans.	ditto	36½	4 5 6	Vivians.
ditto	90	6 13 6	—	ditto	26½	4 5 6	Williams.
ditto	41	3 18 0	Vivians.	Tresavean	122	4 17 6	Freemans.
ditto	41	3 18 0	Freemans.	ditto	96	7 9 6	—
ditto	39	4 6 0	—	Fowey C.	109	5 4 6	Williams.
ditto	39	4 6 0	English Co.	ditto	104	4 18 0	Freemans.
Hallenbeag	82	5 1 0	Nevill & Co.	Gt. W. Char.	21	4 3 0	Vivians.
ditto	40	6 15 0	English Co.	ditto	21	4 3 0	Nevill & Co.
ditto	40	6 15 0	Vivians.	ditto	35	5 11 6	—
ditto	80	3 4 0	—	ditto	33	2 15 6	Vivians.
ditto	30	3 4 0	Williams.	ditto	19	10 4 6	Nevill & Co.
ditto	48	2 17 6	Vivians.				

TOTAL PRODUCE.

United Mines	1199	£6505 18 6	Trewavas	229	£1318 7 0
Hallenbeagle	349	1573 19 6	Fowey Consols	213	1079 3 6
North Downs	300	1903 7 6	Gt. Wh. Charlotte	120	493 5 0
Tresavean	218	1342 5 6			

Average standard, 113l. 10s.—Average produce, 7¾.—Average price, 5l. 7s. 6d.—Quantity of ore, 2617 tons.—Quantity of fine copper, 187 tons 18 cwt.—Amount of money, 14,200l. 3s. 6d.—Average standard of last sale, 109l. 9s.—Average produce, 8¾.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
English Copper Company	479	£2180 1 0
Vivian and Sons	626	3791 14 0
Freeman and Co	802	3226 16 0
P. Grenfell and Sons	84½	511 17 6
Sims, Willyams, Neville, Druce, and Co.	291	1461 15 6
Williams, Foster, and Co.	335½	2035 18 0
Total	2617	£14,209 3 6

Copper ores for sale on Thursday next, at Tyack's Hotel, Camborne.—Mines and Parcels.—Consolidated Mines, 910; North Roskear, 307; South Roskear, &c., 201; United Hills, 327; Par Consols, 275; South Wheal Basset, 271; Fowey Consols, 264; Dolcoath, 261; East Wheal Crofty, 237; East Pool, 106; Tretoil, 120; Treleigh Consols, 122; Williams's East Downs, 90; Wheal Harriet, 64; Brewer, 50.—Total, 4012 tons.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and parcels.—Fowey Consols, 276; Wheal Friendship, 220; Levant, 216; Wheal Buller, 167; Harvey's Ore, 144; Wheal St. Andrew, 14; Providence Mines, 131; Creeg Braws, 131; Botallack, 111; Wheal Speed, 91; British Lead and Silver Mines, 64; Wheal Busy, 16; Wheal Trenwith, 51; Rellistian, 47; Wheal Unity Wood, 22; Sanger and Co.'s Ore, 24; West Wheal Rodney, 19; Boscaswell Downs, 6.—Total, 1900 tons.

SALE OF COPPER ORES AT SWANSEA.

Copper ores for sale May 4.—Knockmahon 133, ditto 104, ditto 100, ditto 79, ditto 79, ditto 59—Cobre 100, ditto 91, ditto 90, ditto 49, ditto 47, ditto 76, ditto 53—Chili 68, ditto 37, ditto 25, ditto 19, ditto 11, ditto 5, ditto 5, ditto 1, ditto 1, ditto 1—Copiapo 105, ditto 90, ditto 16—Lasey 113—Bearhaven 84—Prince 58, ditto 7, ditto 5, ditto 5, ditto 1—Lackamore 45—Norway 36—Ivy Bing 47, ditto 3—Crowshane 28—Glenmalure 7.—Total 1904 tons.

SALE OF BLACK TIN,

By Ticket, on the 12th of April, at Truro.

Mines.	Tons.	Price.	Amount.	Purchasers.
Charlestown	14	£37 10 0	£525 0 0	Williams & Co.
ditto	14	37 10 0	525 0 0	Bolithos and Co.
ditto	17½	38 15 0	658 11 3	ditto.
ditto	17½	35 5 0	617 10 3	Williams and Co.
Budnick	4½	39 0 0	175 10 0	Bolithos and Co.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Total tons, [illegible]

PRICES OF MATERIALS IN CORNWALL

AS SUPPLIED AT THE PRINCIPAL MINES IN THE FOLLOWING MONTHS.

[illegible]

METEOROLOGICAL JOURNAL, 1842.

[illegible]

Wind variable, N.E. prevailing.

[illegible]

LATEST CURRENT PRICES OF METALS.

LONDON, APRIL 29, 1842.

	£ s. d.		£ s. d.
Iron, Eng.—Bar ton 0 0 0 to	6 15 0	Copper—Foreign.... (dy. 37s.)	—
Do. Carg. in Wales	5 15 0	Tin, Brit.—Blocks.......cwt	3 12 0
Hoops ......ton	9 0 0	Bars..........do.	3 14 0
Sheets, ...ton	10 0 0	Banca....0 0 0 to	3 12 0
Pig, No. 1......ton	4 15 0	Straits ....0 0 0 to	3 6 0
Do. in Wales	4 0 0	Tin Plates—I.C. (box)..1 10 0 to	1 12 0
Foreign—Swedes, cn. bd. ton	12 10 0	I.X. do. ..1 16 0 to	1 18 0
Russian com....ton	14 0 0	(Others in proportion.)	
Duty 20s. per ton. P.S.I.......ton	15 0 0	Lead, Brit.—Pig ....ton	19 10 0
C.C.N.D. ......ton	15 0 0	Sheet ......ton	20 5 0
Steel, Eng. Blistered, 25 0 0 to	45 0 0	Shot ......ton	21 10 0
Shear do. do. 45 0 0..	64 0 0	Red ....ton	20 10 0
Cast do. do. 45 0 0..	64 0 0	White (dry)..ton	24 0 0
Foreign—Duty 20 per cent. Swedes in kgs. bd. ton	15 10 0	Do. (gd. in oil) ton	22l a 30
Do. Faggots bd. ton	19 10 0	Foreign—Span. (dy. 40s.) .	19 0 0
Milan...... bd. ton	0 0 0	Spelter ....0 0 0 to	27 0 0
Copper, Brit.—Cake.......ton	96 0 0	For delivery 0 0 0 to	26 12 0
Tile ....do.	94 0 0	English Sheets........	40 0 0
Sheets.... lb.	0 0 11	Quicksilver—(dy. 1d. per lb.)	0 4 0

EXPORTATION OF GOLD AND SILVER.—By the official return published by the Customs, the export of the precious metals from the port of London to foreign and colonial ports, for the week ending Thursday last, was as under:—

Silver coin to Rotterdam.......... 60,000 ounces.
Silver bars to Rotterdam.......... 100,000 "

CURRENT PRICE OF GOLD AND SILVER.

Foreign Gold in Bars.. per oz.	£3 17 9	New Dollars........ per oz.	£0 0 0
Portugal pieces	3 17 5	Silver in Bars (standard)	0 4 11½

COAL MARKET, LONDON.

MONDAY.—Prices of coals per ton at the close of the market:—Carr's Hartley 19—Mitchell's West Hartley 17—New Tanfield 13 9—Old Tanfield 14—Pontop Windsor 15—West Wylam 15 6 to 15 9—Wall's End Bewicke and Co. 20—Hedley 19 6—Hilda 19 Killingworth 19 3—New Walker 19—Northumberland 19 6—Wharncliffe 19 6—Belmont 20 6—Haswell 22 3—Hetton 22—Morrison's 19—Stewart's 22 6—Hartlepool 22—Adelaide 21—Tees Hetton 16 6.—Ships arrived, 27.

WEDNESDAY.—Carr's Hartley 19—Chester Main 16 6—Holywell Main 16 6—Old Tanfield 14—Ord's Redheugh 14 6—Tanfield Moor 19 6—West Wylam 15 6—Hartley 18 3—Wall's End Hilda 19 3 Wharncliffe 19 6—Haswell 21 3 to 21 6—Lambton 21 to 21 6—Morrison's 19—Stewart's 21 9—Whitwell 20—Hartlepool 21 6—Howden 20 3.—Ships arrived, 45.

FRIDAY.—Adair's 15—Carr's Hartley 19—Chester Main 19 6—New Tanfield 13 9—Ord's Redheugh 14 6—Tanfield Moor 19—Wall's End Hedley 19—Northumberland 17 6—Haswell 21—Hetton 21—Lambton 21—Stewart's 21—Cassop 21—Hartlepool 21.—Ships arrived, 29.

CORNISH STEAM-ENGINES.—Marazion, April 11.—The number of pumping-engines reported this month is forty-eight. They have consumed 4165 tons of coal, and lifted 34,000,000 tons of water 10 fathoms high. The average duty of the whole is, therefore, 56,000,000 lbs. lifted one foot high by the consumption of a bushel of coal.

THOS. LEAN & BROTHERS.

PRICES OF MINING SHARES.

Shares.	BRITISH MINES.	Paid.	Price
500	Anglesey	5	—
4,000	Bedford	1¼	2¼ ½
4,000	Bissoe Bridge	5	[illegible]
20,000	British Iron	70	65a70
6,000	Blaenavon	40	20
120	Brewer	—	100
79	Budnick	—	100
1,000	Carn Brea	—	150
2,000	Cornubian Lead Co.	2	4½
5,000	Cornwall Great United	10½	1
	Cuddra	10	—
512	Cook's Kitchen	—	50
112	Charlestown	—	350
5,000	Dartmoor Consols	5	1½
10,000	Durham County Coal Co.	37	9
2,000	Danescombe	—	2
6,000	De Dunstanville	—	—
200	Diamond	3½	10
1,200	East Mulberry Hills	2½	1
128	East Pool	—	200
4,000	East Tretoil	1	½
128	Gavrigan	—	22 ½
100	Great Consols	97	1200
3,200	Great Wh. Prosper	7½	6½
14,000	Great Wh. Charlotte	8	1¼
10,000	Hibernian	12½	2¼
1,000	Holmbush	14	45
2,000	Isle of Sark (Guernsey)	11	15
10,000	Mining Co. of Ireland	7	13½
6,000	Polbreen	4	1
3,000	Polberou Consols	10	¼
2,000	Rellistian	—	½
5,000	Redmoor Consolidated	5	1½
10,000	Rhymney Iron	50	16
100	Rosewall Hill	100	100
800	South Towan	19	1
64	South Wheal Basset	—	410

Shares.	BRITISH MINES.	Paid.	Price
4,000	Treguilian	4½	[illegible]
4,000	Treleigh Consols	4½	[illegible]
4,565	Tamar Consols	3	[illegible]
6,000	Tin Croft	5¼	[illegible]
4,300	Tretoil	1½	[illegible]
170	Treviskey and Barrier	—	[illegible]
96	Tresavean	—	1400
120	Trethellan	—	300
4,000	United Hills	5	[illegible]
6,000	Wicklow Copper	5	[illegible]
3,843	West Wheal Jewel	10	[illegible]
	FOREIGN MINES.		
5,000	Alten Mining Company	13½	[illegible]
10,000	Anglo Mexican Co.	100	[illegible]
3,374	Do. Subscription	25	[illegible]
2,000	Bolanos	150	[illegible]
	Ditto Scrip	15	[illegible]
10,000	Brazilian Imperial	21	[illegible]
10,000	Bolivar	20	[illegible]
10,000	Ditto Scrip	10	[illegible]
10,000	Cata Branca } Brazilian Co.	6½	—
10,000	Conceição } Brazilian Co.	4	—
12,000	Cobre Copper Company	40	[illegible]
8,500	Colombian Co. regis.	55	[illegible]
10,000	Copiapo Mining Co.	13½	[illegible]
20,000	General Mining Assn.	20	—
5,351	Mexican Company	[illegible]	[illegible]
12,000	Macaubas and Cocaes	25	[illegible]
14,302	Real del Monte, regis.	[illegible]	[illegible]
	Do. unregistered	—	[illegible]
	Ditto Loan Notes	150	[illegible]
7,000	Royal Santiago	10	[illegible]
11,000	St. John d'el Rey	14½	[illegible]
40,000	United Mexican	40	[illegible]
	Black Scrip, add. capital	5	[illegible]
	Red New Scrip	5	[illegible]

RAILWAY SHARE LIST AND TRAFFIC RETURNS.

Line.	Entire Lgth.	Now Open.	Present actual cost.	Pd. on Share.	Val. of Share.	Last week's Returns.
Arbroath and Forfar Railway	15	15	£131,643	25	22	—
Birmingham & Derby Junc.	48	38½	851,044	100	52	1081 11 0
Birmingham and Gloucester	52½	51	1,012,721	100	57 6¼	1509 17 0
Brandling Junction	25	25	457,694	40	—	743 0 0
Chester and Birkenhead	14½	14½	416,064	50	30	454 14 0
Dublin and Kingstown	6	6	335,240	100	27½	—
Dundee and Arbroath	16½	16½	134,994	25	25	200 0 0
Eastern Counties*	126½	17½	1,476,170	25	9¼	800 13 0
Edinburgh and Glasgow	46	46	1,233,334	50	33 4½	2073 1 0
Glasgow and Ayr	41	40	690,343	45	40	911 13 0
Glasgow and Paisley Joint	32½	32½	300,000	25	25	500 6 11
Gd. Junc. & Chester & Crewe	113½	113½	2,192,047	100	183	4650 3 0
Great North of England	75	45	1,000,000	100	87½	1393 10 0
Great Western	110	110	5,200,044	80	94 3¼	13210 13 0
Hayle	16	16	115,000	100	—	134 18 0
Hull and Selby	31	31	600,000	50	45	860 0 0
Lancaster & Preston Junc.	20½	20½	300,000	47½	37½	395 0 0
Liverpool and Manchester	31	31	1,410,000	100	191	3619 0 7
London and Birmingham	112½	112½	5,724,967	90	180	16013 4 0
London and Blackwall	3¾	3¾	867,000	25	12½	947 13 10
London and Brighton	46	46½	2,000,000	50	37½ 7	2321 14 0
London and Croydon	10½	10½	657,902	13½	14½ 14	443 0 0
London and Greenwich	3¾	3¾	793,000	20	5½	820 13 0
London and South Western	90	77	2,395,867	39½	62½ 61	4641 4 0
Manchester, Bolton, & Bury	10	10	778,836	80	50	571 11 0
Manchester & Birmingham	43	5	1,106,912	45	28 7½	338 7 0
Manchester and Leeds	50	50	3,130,500	70	88 7¼	4300 0 0
Midland Counties	57	57	1,450,000	100	79½	2300 0 0
Newcastle and Carlisle	60½	61½	750,000	100	90	1345 0 0
Newcastle and N. Shields	7	7	312,677	50	44	313 0 0
Northern and Eastern†	32½	32½	800,913	40	42½ 3	1178 0 0
North Midland	72½	72½	2,800,687	100	67	3267 18 0
North Union‡	23	23	565,000	75	73½	971 0 0
Preston and Wyre	19½	19½	276,700	50	50	138 14 0
Sheffield and Manchester	40	7	391,327	62½	—	163 11 0
Ulster	25	8	295,040	22½	—	410 19 0
York and North Midland	25	25	445,300	50	82½ 4	1580 15 0

* Including Northern and Eastern Railway toll. † Rent and toll to Eastern Counties (about 150l. per week) included in the returns. ‡ The Liverpool and Manchester toll is deducted.

THE LONDON GAZETTE—BANKRUPTS.

TUESDAY.—W. Cooper, Lower Shadwell, common brewer—F. J. Mitchell, Aldersgate street, builder—J. A. Cater, Hertford, brewer—J. Sands and Elizabeth Gill, Coventry, riband manufacturers—H. W. Low and W. M. Westermann, Cheapside, and C. A. Carter, England, merchants—J. Allen, Penzance, Cornwall [illegible]

FRIDAY.—[illegible]

London: Printed and Published by Henry English, the Proprietor, at his Office, No. 57, New Broad-street, in the city of London; where all Communications [illegible]

MONEY MARKET AND CITY NEWS.

CURRENT PRICES OF ENGLISH AND FOREIGN FUNDS.

Consols Money, 92⅞	Dutch, 2½ per Cent., 52⅛ 3⅛
Ditto Account, 92⅞	Ditto, 5 per Cent., 101⅛ ⅞
New 3½ per Cents., 101⅞ 1	Portuguese, 5 per Cent., 35⅛ 9
Exchequer Bills, 39 41 pm.	Ditto, 3 per Cent., 22⅞ 3½
Belgian Bonds, 5 per Cent., 102⅞ 4½	Spanish, Actives, 5 per Cent., 24⅞ ⅞
Brazil, 5 per Cent., 67⅛ 8	Chili, 6 per Cent., 75 6
Danish, 3 per Cent., 80⅞ 1⅛	Colombian, 6 per Cent., 26½ 7
Russian, 5 per Cent., 113 ⅛	Mexican, 5 per Cent., 34⅞ ⅞

REMARKS ON THE OPERATIONS OF THE WEEK.

SATURDAY, April 23.—The national securities advanced about ⅛ per cent., the closing rates of Consols being, for Money, 91⅞ ⅛, and for the Account, 91⅞ 2; Bank Stock, 166; India Stock, 244 6; and Exchequer Bills, 37s. 39s. pm.—But few transactions took place in the foreign funds; the Peninsular and Continental stocks were without alteration, and Mexican receded 1 per cent.; the other securities are nearly stationary.—The share market was firm at former quotations.—In mining shares, Bolanos (scrip) were done at 61 ⅞; Brazilian Macaubas and Cocaes United, 4½; United Mexican (new scrip), 3⅛.—In joint-stock banks, Australasian Bank, 51⅞ ex div.; Colonial Bank, 25⅞; London and Westminster, 22 1⅛; and Union of Australia, 29½.

MONDAY.—Business continues active in the English funds, and prices still on the advance; Consols for the Account closed at 92⅛ ⅛, and for Money 91⅞ 2⅛; South Sea Old Annuities, 89⅞; India Bonds, 19s. pm.; and Exchequer Bills, 38s. 40s. pm.—In the foreign market transactions were exceedingly limited, and unattended by any fluctuation of consequence.—There was some animation in the share market; the chief business was in the lately-opened Edinburgh and Glasgow, which fluctuated between 53⅞ 54; the Manchester and Leeds were also in request at from 19 to 21 per share; the market for Brightons was flat at 37⅛ ⅛; Birminghams, 179 81; Great Western, 94 5½; Blackwalls, 12⅛ per share; South-Western, 61⅛ ⅞; Eastern Counties, new, 5⅞; Greenwich, 6; and Croydon, 14.—In mining shares Anglo-Mexican Subscription Mine, 3; Bolanos Scrip, 6⅛ ⅞; Brazilian Macaubas and Cocaes United, 4½; and United Mexican (new scrip) were quoted 3½.—London Joint-Stock Bank, 17⅞; London and Westminster, 22⅛; Union of London, 9⅞ 10⅛; and Canada Bank, 30½.

TUESDAY.—The English funds continue to advance, with every prospect of permanent buoyancy, there being more money than stock in the market. The jobbers are strong buyers, the demand for actual investment being still on the increase. With the news from Paris the advice of the sudden demise of M. Humann, the French Minister of Finance, was received. Consols for Money closed 92⅛ ⅛; and for the Account, 92⅛ ⅞; India Bonds, 21s. 21s. pm.; Bank Stock, 166 7; India Stock, 246 7; South Sea New Annuities, 91⅛; and Exchequer Bills, 39s. 41s. pm.—In foreign stocks, although not much doing, the quotations were firm, with a slight improvement in those of the more substantial order.—The share market was steady, and prices are without alteration.—Cobre Copper Mining Company, 33⅞ ⅛.—National Provincial Bank of England, 36 ⅛.

The amount of business transacted in the foreign exchanges was not to any large extent. There was a better supply of bills upon Hamburgh than on the preceding post, and the rate was rather higher. The price for Amsterdam and Paris was about the same as on Friday.

The premium on gold at Paris is 10 per mille, which, at the English Mint price of 3l. 17s. 10½d. per ounce for standard gold, gives an exchange of 25 40⅛, and the exchange at Paris on London at short being 25 62⅛, it follows that gold is 0·86 per cent. dearer in London than in Paris.

By advices from Hamburgh the price of gold is 434 per mark, which, at the English Mint price of 3l. 17s. 10½d. per ounce for standard gold, gives an exchange of 13·21, and the exchange at Hamburgh on London at short being 13·11⅛, it follows that gold is 0·81 per cent. dearer in London than in Hamburgh.

The course of exchange at New York on London is 107 per cent., and the par of exchange between England and America being 109 23-40 per cent., it follows that the exchange is 2·57 per cent. against England. But the quoted exchange at New York being for bills at sixty days' sight, the interest must be deducted from the above difference.

WEDNESDAY.—The English stocks fully maintained their late improved rates, at which a large amount of business was transacted; Consols for Money closed 92⅛ buyers, and for the Account 92⅞; Exchequer Bills, 39s. 41s. pm.; India Stock, 247⅞ 8; India Bonds, 19s. 21s. pm.; and Bank Stock, 166⅛ 7⅛.—No alteration in foreign funds, in which very little business was done.—Less activity was exhibited in the share market, and the quotations of some of the lines were at rather a depressed rate; Brightons were 38⅛ ⅛; Birminghams, 181 2⅛; Great Westerns, 91⅛ ⅞; South-Westerns, 61⅛; Blackwalls, 12⅛ ⅛; Edinburgh and Glasgow, 54⅛; Greenwich, 5⅞; and Croydon, 13⅞ 14.—Cata Branca Mining Association, 5⅛; and Real del Monte (unregistered), 3⅞.—London and Westminster Bank, 21⅞; National Provincial Bank of England, 35 ⅛; and Union of Australia, new, 3⅛.

THURSDAY.—The extremely satisfactory state of the English stock market was well kept up, for, notwithstanding a sale by the Bank broker of money stock (about 200,000l.), which gave a temporary check, the funds took a more extraordinary rise than has been witnessed on any day since the advance commenced, which, with scarcely a reaction, has now been going on for the last fortnight; from 92⅛ Money, and 9 ⅞ Account, at which Consols left off yesterday, they closed to-day at 93⅛ Money, and 93⅛ ⅛ for Account—an improvement equal to ⅛ per cent.; Bank and India Stock were better, but Exchequer Bills remained the same.—There was a trifling improvement in Portuguese Stock, but the foreign securities generally have not participated in the rise which has taken place in the English funds.—This was settling day of account in railway shares; in most lines there was an improvement in quotations, and in all a more active demand for shares.—Australasian Bank, 71⅞; Colonial, 26⅛; London and Westminster, 21⅞ ⅞; Provincial Bank of Ireland, new, 15 16; Union of Australia, 29⅛ ⅛; ditto, new, 3⅛.

FRIDAY.—The advance in the prices of English securities received a slight check to-day, caused, it was said, by some sales effected on Chancery and private account; the reaction, however, which occurred (at most not more than ⅛ per cent.), is a trifle compared with the great improvement lately made in prices. Consols for Money were quoted, at the close of business, 92⅞ ⅞; and for the Account, 92⅞ buyers; Exchequer Bills, 38s. 40s. pm.; Bank Stock, 167 168; India Stock, 248 249; India Bonds, 20s. 22s. pm.—The prices of foreign securities remained unaltered. The half-monthly account presented no feature of moment; cash was plentiful at 3 per cent., and all differences were regularly and satisfactorily adjusted.—Money was also very easy in the share settlement, accounted for, in a measure, by the very strong rumour current that the Bank directors have laid out 60,000l. at interest on railway debentures.—The issue of new shares for the completion of the South-Eastern and Dover line had a beneficial effect, and also slightly improved the value of Brightons. The Birmingham line also improved 1l. per share, and the share market, altogether, presented a very firm appearance.—Cobre Copper Mining Company, 34⅛.—Union Bank of Australia, new shares, 3⅛.—Mexican and South American Company, 3⅛.

There was a fair amount of business doing in the foreign exchanges. Owing to a greater demand for bills upon Amsterdam, the rate on that place was slightly depressed. Hamburgh and Paris may be considered the same as last post.

From a Parliamentary return just issued it appears that the total amount of loans advanced by the commissioners for the issue of Exchequer Bills for public works, &c., from June 17th, 1817 (the date of the commission), to the 31st of December, 1841, for various undertakings, was 5,502,130l. Of this amount the Thames Tunnel forms no inconsiderable item, no less than 251,000l. having been advanced for the carrying on of that concern. The sum of 445,800l. was advanced to railways.

BANK OF ENGLAND.—Quarterly Average of the Weekly Liabilities and Assets, from the 1st of February to the 23d of April, 1842, both inclusive:—

LIABILITIES.		ASSETS.	
Circulation	£17,[illegible]	Securities	£21,[illegible]
Deposits	[illegible]	Bullion	[illegible]
	£[illegible]		£[illegible]

Downing street, April 26.

[From our own correspondents.]

PARIS, April 28.—[illegible]

LATEST PRICES OF IRISH STOCKS.—[illegible]

LEEDS, Thursday.—[illegible]

E. B. WATSON & Co.

HULL, Thursday.—[illegible]

NEWCASTLE, Friday.—Our share market, in general, is firm, a good demand existing for Great North of England Railway shares, and also for shares of some of the local banks. Brandling Junction Railway shares are offered at lower rates.—North of England Joint-Stock Bank, 4½l.; Northumberland and Durham District, 8l.; Newcastle, Shields, and Sunderland Union 8l.; Newcastle-upon-Tyne Joint-Stock, 3l.; Newcastle Commercial, 9l.; Sunderland Joint-Stock, 6l.; Darlington District, 4l.; Carlisle City and District, 20l.; Carlisle and Cumberland, 6⅛l.; Stockton and Durham County, 4⅛.—Newcastle and Carlisle Railway, 92l.; Newcastle and North Shields, 42l.; Brandling Junction, 41l.; Durham and Sunderland, 19⅛l.; Clarence, 20l.; Hartlepool and Stockton, 35l.; Hartlepool Dock and Railway, 19l.; Great North of England, 88l.—Newcastle Union Shipping Company, 3l.; Port of Newcastle, 15l.; London, Newcastle, and South Shields, 5l.; Gateshead and Tyne, 17l.—North and South Shields Steam Ferry, 11l.—Newcastle Subscription Water Company, 8l.—Newcastle and Gateshead Union Gas Company, 7⅛l.—Durham County Coal Company, 10l.

BRISTOL, Friday.—Business continues very limited in this market, but firm at my quotations.—Great Western Railway, 94l. to 95l.; halves, 64⅛l. to 65l. fifths, 10⅛l. to 10⅞l.; Bristol and Exeter, 43l. to 44l.; Bristol and Gloucester, 5l. to 6l.; Birmingham and Gloucester, 55l. to 57l.; Birmingham and Derby, 5l. to 57l.; Cheltenham Union, 17⅛l. to 19⅛l.; London and Brighton, 36⅛l. to 36⅛l.; Taff Vale, 6l. to 65l.—Bristol Gas Company, 32l. to 33l.; Clifton, 24l. to 25l.

EDINBURGH, Wednesday.—Edinburgh and Glasgow Railway, 53l.; Dalkeith and Edinburgh, 30l.; Glasgow and Greenock, 23l.; Glasgow and Garnkirk, 40l.; Glasgow and Ayrshire, 36⅛l.; Wishaw and Coltness, 38l.; Dundee and Arbroath, 73⅛l.; Arbroath and Forfar, 22l.

GLASGOW, Wednesday.—Ballochney Railway, 63l.; Dundee and Arbroath, 73⅛l.; Edinburgh and Glasgow, 53⅛l.; Garnkirk and Glasgow, 40l.; Glasgow and Greenock, 22⅛l.; Glasgow, Paisley, Kilmarnock, and Ayr, 36⅛l.; Monkland and Kirkintilloch, 57l.; Slamannan, 25l.; Wishaw and Coltness, 38l.

LIVERPOOL, Friday.—Grand Junction Railway, 185l.; Lancaster and Preston, 29⅞l.; Liverpool and Manchester, 187⅛l.; North Union, 72⅞l.; Paris and Rouen, 16⅛l.; York and North Midland, 94l.—Albion Bank, 29⅛l.; Borough, 13⅛l.; Bank of Liverpool, 14⅛l.; Liverpool Banking Company, 8l.; Manchester and Liverpool District, 10⅛l.; North and South Wales, 4⅛l.; Royal, 22⅛l.; South Lancashire, 6l.; Union, 11⅛l.

MANCHESTER, Thursday.—Manchester and Birmingham Railway, 28⅛l.; Manchester, Bolton, and Bury, 50⅛l.; Manchester and Leeds Railway, 42⅛l.—Bank of Manchester, 4⅛l.; Stockport, 7⅛l.; Manchester and Liverpool District, 10⅛l.; Manchester and Salford, 10⅛l.; South Lancashire, 6l.; Union of Manchester, 6⅛l.—Manchester Fire and Life Assurance Company, 9⅛l.—Union Plate Glass Company, 6l.

BIRMINGHAM, Thursday.—London and Birmingham Railway, 179l. to 180l.; London and Brighton, 36l. to 36⅛l.; London and South-Western, 61l. to 62l.; Great Western, 93l. to 95l.; Birmingham and Derby, 51l. to 53l.; Birmingham and Gloucester, 55l. to 57l.—Birmingham Banking Company, 19l.; Birmingham and Midland, 33⅛l.; Birmingham and Staffordshire, 7l.

SALE OF COPPER ORES IN CORNWALL.

Sampled April 13, and Sold at Andrew's Hotel, Redruth, April 28.

Mines.	Tons.	Price.	Purchasers.	Mines.	Tons.	Price.	Purchasers.
United M.	147	£6 0 0	English Co.	Hallenbeagle	40	5 3 6	Vivians.
ditto	124	4 14 6	——	ditto	34	1 7 6	P. Grenfells.
ditto	123	5 11 0	Nevill & Co.	N. Downs	109	4 11 0	Williams.
ditto	122	6 13 6	Vivians.	ditto	88	9 7 6	——
ditto	56	4 17 6	——	ditto	44	4 15 0	——
ditto	56	4 17 6	English Co.	ditto	42	6 14 0	——
ditto	107	5 6 6	Vivians.	ditto	17	5 4 6	——
ditto	103½	5 5 0	——	Trewavas	80	7 8 0	——
ditto	103½	5 3 0	P. Grenfells.	ditto	76	4 9 0	Vivians.
ditto	100	4 16 0	Freemans.	ditto	36½	4 5 6	Vivians.
ditto	90	6 12 6	——	ditto	36½	4 5 6	Williams.
ditto	41	3 18 0	Vivians.	Tresavean	122	4 17 6	Freemans.
ditto	41	3 16 0	Freemans.	ditto	96	7 9 6	——
ditto	39	4 6 0	——	Fowey C.	109	5 4 6	Williams.
ditto	39	4 6 0	English Co.	ditto	104	4 18 0	Freemans.
Hallenbeag	92	5 1 0	Nevill & Co.	Gt.W.Char.	21	4 3 0	Vivians.
ditto	40	6 15 0	English Co.	ditto	21	4 3 0	Nevill & Co.
ditto	40	6 15 0	Vivians.	ditto	35	3 11 6	——
ditto	30	3 4 0	——	ditto	33	2 15 6	Vivians.
ditto	30	3 4 0	Williams.	ditto	10	10 4 6	Nevill & Co.
ditto	45	2 17 6	Vivians.				

TOTAL PRODUCE.

	Tons.	£ s. d.		Tons.	£ s. d.
United Mines	1159	£6081 16 6	Trewavas	229	£1318 7 0
Hallenbeagle	349	1575 19 6	Fowey Consols	213	1079 2 6
North Downs	300	1905 7 6	Gt. Wh. Charlotte	120	493 5 0
Tresavean	218	1549 5 6			

Average standard, 113l. 10s.—Average produce, 7⅛.—Average price, 5l. 7s. 0d.—Quantity of ore, 2617 tons.—Quantity of fine copper, 187 tons 16 cwt.—Amount of money, 14,200l. 5s. 6d.—Average standard of last sale, 109l. 9s.—Average produce, 8⅛.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
English Copper Company	470	£2160 1 0
Vivian and Sons	646	3091 14 0
Freeman and Co.	602	3226 16 0
P. Grenfell and Sons	64½	311 17 6
Sims, Willyams, Nevills, Druce, and Co.	281	1461 15 6
Williams, Foster, and Co.	333½	23 5 16 0
Total	2617	£14,200 5 6

Copper ores for sale on Thursday next, at Tyack's Hotel, Camborne.—Mines and Parcels.—Consolidated Mines, 910; North Roskear, 607; South Roskear, &c., 204; United Hills, 387; Par Consols, 275; South Wheal Basset, 271; Fowey Consols, 254; Redruth, 261; East Wheal Crofty, 237; East Pool, 106; Tretoil, 120; Treleigh Consols, 122; Williams's East Downs, 90; Wheal Harriet, 82; Brewer, 50.—Total, 4312 tons.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and parcels.—Fowey Consols, 276; Wheal Friendship, 220; Levant, 213; Wheal Buller, 107; Harvey's Ore, 141; Wheal St. Andrew, 14; Providence Mines, 13; Creeg Brawse, 131; Botallack, 111; Wheal Speed, 51; British Lead and Silver Mines, 64; Wheal Busy, 56; Wheal Trenwith, 51; Relistian, 47; Wheal Unity Wood, 32; Sanger and Co.'s Ore, 24; West Wheal Rodney, 10; Boscaswell Downs, 6.—Total, 1260 tons.

SALE OF COPPER ORES AT SWANSEA.

Copper ores for sale May 4.—Knockmahon 133, ditto 104, ditto 100, ditto 79, ditto 79, ditto 49—Cobre 100, ditto 51, ditto 60, ditto 43, ditto 47, ditto 26, ditto 33—Chili 48, ditto 27, ditto 30, ditto 16, ditto 11, ditto 5, ditto 5, ditto 1, ditto 1, ditto 1—Copiapo 100, ditto 90, ditto 16—Laxey 113—Bearhaven 64—Prince 16, ditto 7, ditto 5, ditto 5, ditto 1—Lackamore 43—Norway 35—Ivy Slag 27, ditto 3—Cronebane 23—Glenmalure 7.—Total 1964 tons.

SALE OF BLACK TIN,

By Ticket, on the 19th of April, at Truro.

[illegible]

Total tons, [illegible]—Amount, £[illegible]

PRICES OF MATERIALS IN CORNWALL

AS SUPPLIED AT THE PRINCIPAL MINES IN THE FOLLOWING MONTHS.

[illegible]

METEOROLOGICAL JOURNAL, 1842.

[illegible]

Wind variable, N.E. prevailing.

[illegible]

LATEST CURRENT PRICES OF METALS.

LONDON, APRIL 29, 1842.

	£ s. d.		£ s. d.
Iron, Eng.—Bar ton 0 0 0 to	6 15 0	Copper—Foreign.... (dy. 27s.)	——
Do. Carg. in Wales	5 15 0	Tin, Brit.—Blocks........cwt	3 12 0
Hoops ...... ton	9 0 0	Bars ....do.	3 14 0
Sheets, ... ton	10 0 0	Banca .....0 0 0 to	3 12 0
Pig, No. 1...... ton	4 15 0	Straits .....0 0 0 to	3 6 0
Do. in Wales	4 0 0	Tin Plates—I.C. (box)..1 10 0 to	1 12 0
Foreign—Swedes, cn. bd. ton	12 10 0	I.X. do. ..1 16 0 to	1 18 0
Russian ccnd.... ton	14 0 0	(Others in proportion.)	
Duty 20s. per ton. P.S.I...... ton	15 0 0	Lead, Brit.—Pig ... ton	19 10 0
C.C.N.D. ton	18 0 0	Sheet ...... ton	20 5 0
Steel, Eng. Blistered, 25 0 0 to	45 0 0	Shot ...... ton	21 10 0
Shear do. do. 45 0 0 ..	84 0 0	Red ...... ton	20 10 0
Cast do. do. 45 0 0 ..	84 0 0	White (dry).. ton	24 0 0
Foreign—Swedes in kgs bd ton	15 10 0	Do. (gd. in oil) ton	22l. a 30
Duty 20 per cent. Do. Faggots bd. ton	19 10 0	Foreign—Span. (dy. 40s.) .	19 0 0
Milan...... bd. ton	0 0 0	Spelter ....0 0 0 to	27 0 0
Copper, Brit.—Cake...... ton	96 0 0	For delivery 0 0 0 to	26 10 0
Tile ...... do.	94 0 0	English Sheets........	40 0 0
Sheets.... lb.	0 0 11	Quicksilver—(dy. 1d. per lb.)	0 4 0

EXPORTATION OF GOLD AND SILVER.—By the official return published by the Customs, the export of the precious metals from the port of London to foreign and colonial ports, for the week ending Thursday last, was as under:—

Silver coin to Rotterdam.. .... 60,000 ounces.
Silver bars to Rotterdam.. .... 100,000 "

CURRENT PRICE OF GOLD AND SILVER.

Foreign Gold in Bars.. per oz.	£3 17 9	New Dollars......... per oz.	£0 0 0
" .. Portugal pieces	..3 17 5	Silver in Bars (standard)	0 4 11½

COAL MARKET, LONDON.

MONDAY.—Prices of coals per ton at the close of the market:—Carr's Hartley 19—Mitchell's West Hartley 17—New Tanfield 13 9—Old Tanfield 14—Pontop Windsor 15—West Wylam 15 6 to 15 9—Wall's End Bewicke and Co. 20—Hedley 19 6—Hilda 19—Killingworth 19 3—New Walker 19—Northumberland 18 6—Wharncliffe 19 6—Belmont 20 6—Haswell 21 3—Hetton 22—Morrison's 19—Stewart's 22 6—Hartlepool 22—Adelaide 21—Tees Hetton 16 6.—Ships arrived, 27.

WEDNESDAY.—Carr's Hartley 19—Chester Main 16 6—Holywell Main 16 6—Old Tanfield 14—Ord's Redheugh 14 6—Tanfield Moor 19 6—West Wylam 15 6—Hartley 19 3—Wall's End Hilda 19 3—Wharncliffe 19 6—Haswell 21 3 to 21 6—Lambton 21 to 21 6—Morrison's 19—Stewart's 21 9—Whitwell 20—Hartlepool 21 6—Howden 20 3.—Ships arrived, 45.

FRIDAY.—Adair's 15—Carr's Hartley 19—Chester Main 19 6—New Tanfield 13 9—Ord's Redheugh 14 6—Tanfield Moor 19—Wall's End Hedley 19—Northumberland 17 6—Haswell 21—Hetton 21—Lambton 21—Stewart's 21—Cassop 21—Hartlepool 21.—Ships arrived, 29.

CORNISH STEAM-ENGINES.—Marazion, April 11.—The number of pumping-engines reported this month is forty-eight. They have consumed 4163 tons of coal, and lifted 34,000,000 tons of water 10 fathoms high. The average duty of the whole is, therefore, 56,096,000 lbs. lifted one foot high by the consumption of a bushel of coal.

THOS. LEAN & BROTHERS.

PRICES OF MINING SHARES.

Shares.	BRITISH MINES.	Paid.	Price	Shares.	BRITISH MINES.	Paid.	Price
500	Anglesey	5	—	4,000	Tregolian	4½	⅛
4,000	Bedford	1½	2⅛ ⅛	4,000	Treleigh Consols	4⅛	2⅛
4,000	Bissoe Bridge	5	⅛	4,305	Tamar Consols	2	2⅛
20,000	British Iron	70	65 a 6	6,000	Tin Croft	6⅛	3⅛
8,000	Blaenavon	45	20	4,300	Tretoil	1⅛	2⅛
120	Brewer	—	100	170	Treviskey and Barrier	—	125
79	Budnick	—	100	96	Tresavean	—	1600
1,000	Carn Brea	—	150	120	Trethellan	—	200
2,000	Cornubian Lead Co.	2	4½	4,000	United Hills	5	6⅛
1,000	Cornwall Great United	10⅛	1	6,000	Wicklow Copper	5	11
	Cuddra	10	—	3,845	West Wheal Jewel	10	8⅛
512	Cook's Kitchen	—	50		**FOREIGN MINES.**		
112	Charlestown	—	350	5,000	Alten Mining Company	13½	6
5,000	Dartmoor Consols	5	1⅛	10,000	Anglo Mexican Co.	100	2⅛ ⅛
10,000	Durham County Coal Co.	37	9	3,374	Do. Subscription	25	3
2,000	Danescombe	—	2	2,000	Bolanos	150	6
4,000	De Dunstanville	—	—		Ditto Scrip	10	6⅛ ⅛
200	Diamond	3⅛	10	10,000	Brazilian Imperial	21	10
1,200	East Mulberry Hills	3⅛	1	10,000	Bolivar	20	⅛
120	East Pool	—	200	10,000	Ditto Scrip	10	3
4,000	East Tretoil	1	⅛	10,000	Cata Branca } Brazilian	6⅛	—
128	Gavrigan	—	27 4	10,000	Conceiçao } Co.	4	—
100	Great Consols	87	1200	12,000	Cobre Copper Company	40	34⅛
3,200	Great Wh. Prosper	7½	8⅛	8,500	Colombian Co. regis.	55	7
14,000	Great Wh. Charlotte	3	1⅛	10,000	Copiapo Mining Co.	13⅛	9
10,000	Hibernian	12⅛	2⅛	20,000	General Mining Asso.	20	—
1,000	Holmbush	14	45	3,351	Mexican Company	38⅛	3
2,000	Isle of Sark (Guernsey)	11	13	12,000	Mocaubas and Cocaes	25	4⅛ ⅛
10,000	Mining Co. of Ireland	7	13⅛	14,382	{ Real del Monte, regis.	63⅛	3⅛
6,000	Polbreen	4	1		{ Do. unregistered	—	3⅛
3,000	Polberou Consols	10	⅛		Ditto Loan Notes	150	30
2,000	Relistian	—	⅛	7,000	Royal Santiago	10	20 30
3,000	Redmoor Consolidated	5	1⅛	11,000	St. John d'el Rey	14⅛	2
10,000	Rhymney Iron	50	18	40,000	United Mexican	40	3⅛
100	Rosewall Hill	100	100		Black Scrip, add. capital	5	1⅛
800	South Towan	10	1		Red New Scrip	5	3⅛
64	South Wheal Basset	—	410				

RAILWAY SHARE LIST AND TRAFFIC RETURNS.

Line.	Entire Lgth.	Now Open.	Present actual cost.	Pd. on Share.	Val. of Share.	Last week's Returns.
Arbroath and Forfar Railway	15	15	£ 131,643	25	22	——
Birmingham & Derby Junc.	40	38⅛	853,044	100	52	1061 11 0
Birmingham and Gloucester	52⅛	51	1,012,723	100	57 63	1099 17 0
Brandling Junction	35	25	437,494	40	—	745 4 0
Chester and Birkenhead	14⅛	14⅛	4[illegible]	50	30	434 14 0
Dublin and Kingstown	6	6	333,240	100	77⅛	——
Dundee and Arbroath	16⅛	16⅛	134,934	25	26	236 0 0
Eastern Counties*	126⅛	17⅛	1,476,170	23	9⅛	680 11 0
Edinburgh and Glasgow	46	46	1,293,354	50	53 4⅛	2072 1 0
Glasgow and Ayr	51	40	630,342	45	40	913 15 0
Glasgow and Paisley Joint	22⅛	22⅛	360,000	25	25	688 0 11
Gd. Junc. & Chester & Crewe	115⅛	115⅛	2,102,047	100	183	6038 3 0
Great North of England	75	45	1,000,000	100	87⅛	1003 16 0
Great Western	116	116	2,300,044	65	94 3⅛	10010 11 0
Hayle	16	16	125,000	100	—	134 18 0
Hull and Selby	31	31	400,000	50	40	960 0 0
Lancaster & Preston Junc.	20⅛	20⅛	300,000	43⅛	27⅛	305 0 0
Liverpool and Manchester	31	31	1,410,000	100	187	5433 0 0
London and Birmingham	112⅛	112⅛	5,724,987	90	180 a 90	16813 0 0
London and Blackwall	3⅛	3⅛	867,000	25	12⅛ ⅛	847 15 0
London and Brighton	46	46⅛	2,800,300	50	37⅛ 7	2221 14 0
London and Croydon	10⅛	10⅛	537,962	13⅛	14⅛ 14	443 0 0
London and Greenwich	3⅛	3⅛	780,300	20	5⅛	839 15 0
London and South Western	93	77	2,200,867	38⅛	61⅛ 2⅛	4641 4 0
Manchester, Bolton, & Bury	10	10	779,300	80	50	673 11 0
Manchester & Birmingham	45	5	1,106,812	40	28 7⅛	563 7 0
Manchester and Leeds	50	50	2,110,300	70	90 7⅛	4226 0 0
Midland Counties	57	57	1,430,700	100	74⅛	2568 0 0
Newcastle and Carlisle	60⅛	60⅛	750,000	100	90	1065 0 0
Newcastle and N. Shields	7	7	212,477	50	46	318 0 11
Northern and Eastern†	32⅛	32⅛	900,913	42	42⅛ 3	1129 0 0
North Midland	72⅛	72⅛	2,835,697	100	67	4987 10 0
North Union‡	23	23	100,000	75	72⅛	601 0 11
Preston and Wyre	19⅛	19⅛	276,000	50	50	138 14 0
Sheffield and Manchester	40	7	261,337	92⅛	—	161 11 0
Ulster	25	8	220,000	22⅛	—	410 16 0
York and North Midland	24	24	446,500	50	89⅛ 4	1309 12 0

* Including Northern and Eastern Railway toll. † Rent and toll to Eastern Counties (about 150l. per week) included in the returns. ‡ The Liverpool and Manchester toll is deducted.

THE LONDON GAZETTE—BANKRUPTS.

TUESDAY.—W. Cooper, Lower Shadwell, common brewer—F. J. Mitchell, [illegible]dersgate street, builder—J. A. Cater, Hertford, brewer—J. Hands and [illegible] Gill, Coventry, ribbon manufacturers—H. M. Low and W. M. Wontermann, [illegible] [illegible]ersgate, and C. A. Carter, England, merchants—J. Allen, Penzance, Cornwall, baker—S. J. Aldrich, Manchester buildings, Holloway, chemist—W. [illegible] [illegible]

FRIDAY.—G. South, Blackfriars-road, Surrey, licensed victualler—[illegible]

London: Printed and Published by Henry English, the Proprietor, at [illegible]

[illegible]